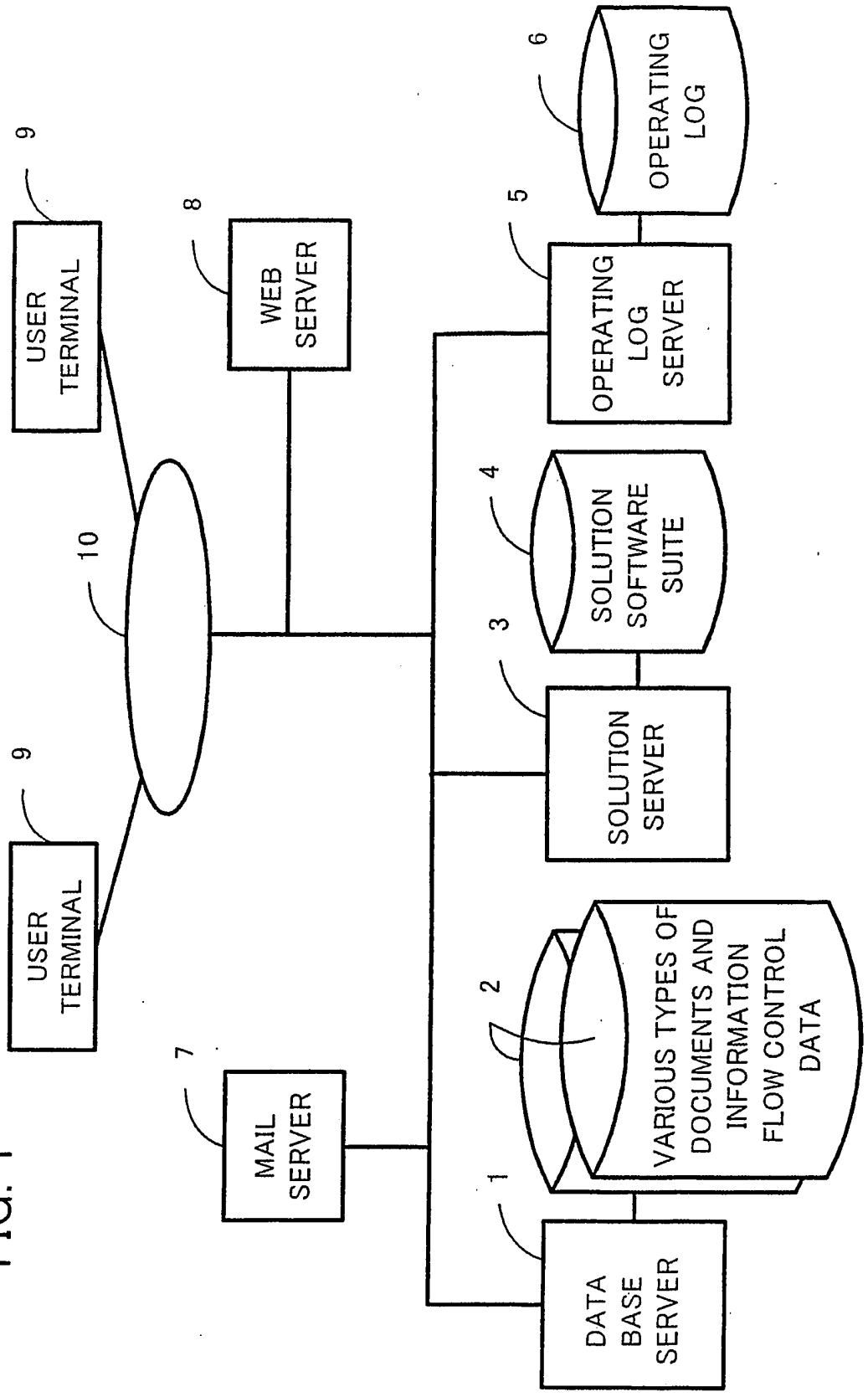

FIG. 1

Best Available Copy

FIG. 2

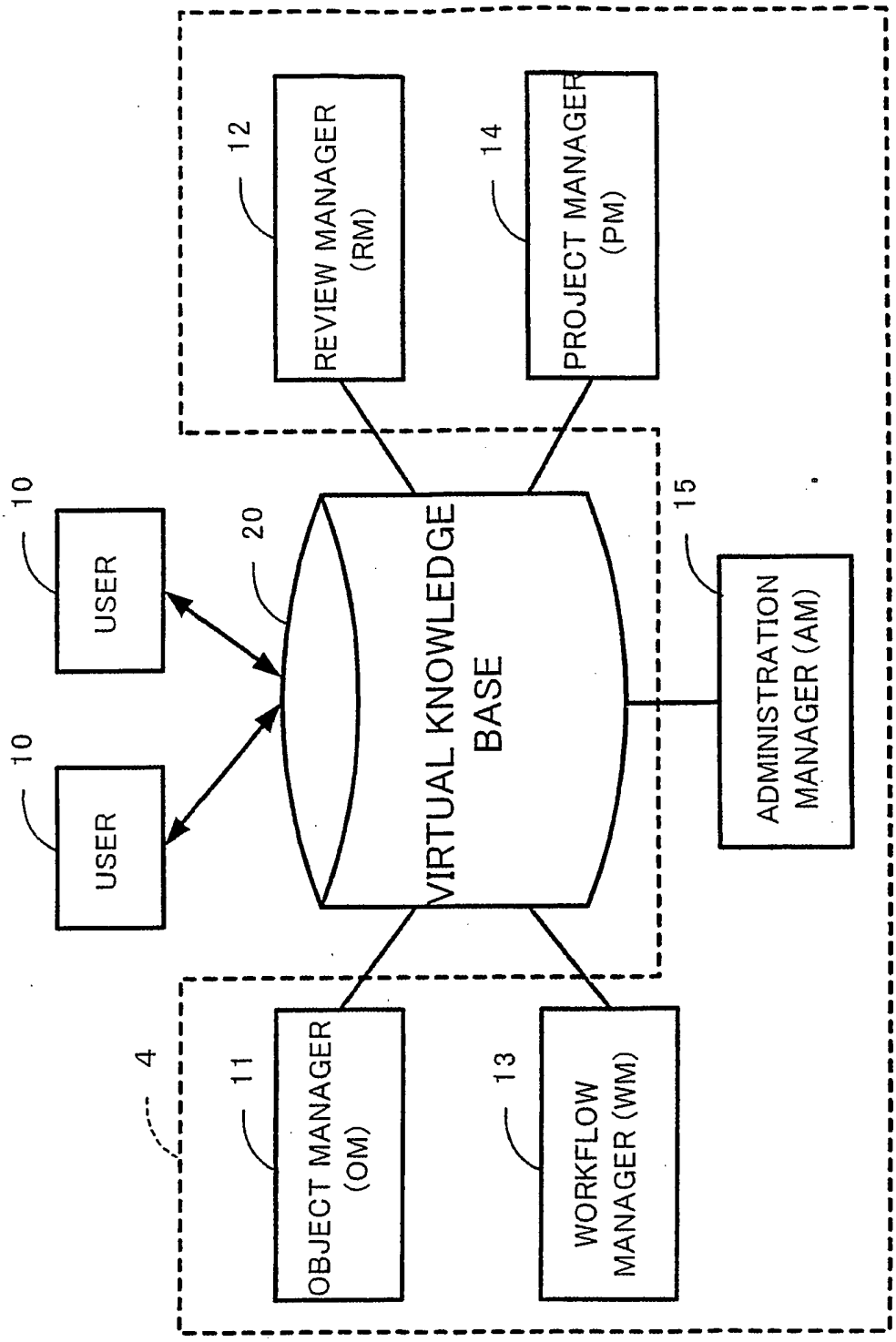
4
10
USER
10
USER
20
VIRTUAL KNOWLEDGE BASE
15
ADMINISTRATION MANAGER (AM)
12
REVIEW MANAGER (RM)
14
PROJECT MANAGER (PM)
11
OBJECT MANAGER (OM)
13
WORKFLOW MANAGER (WM)

FIG. 3

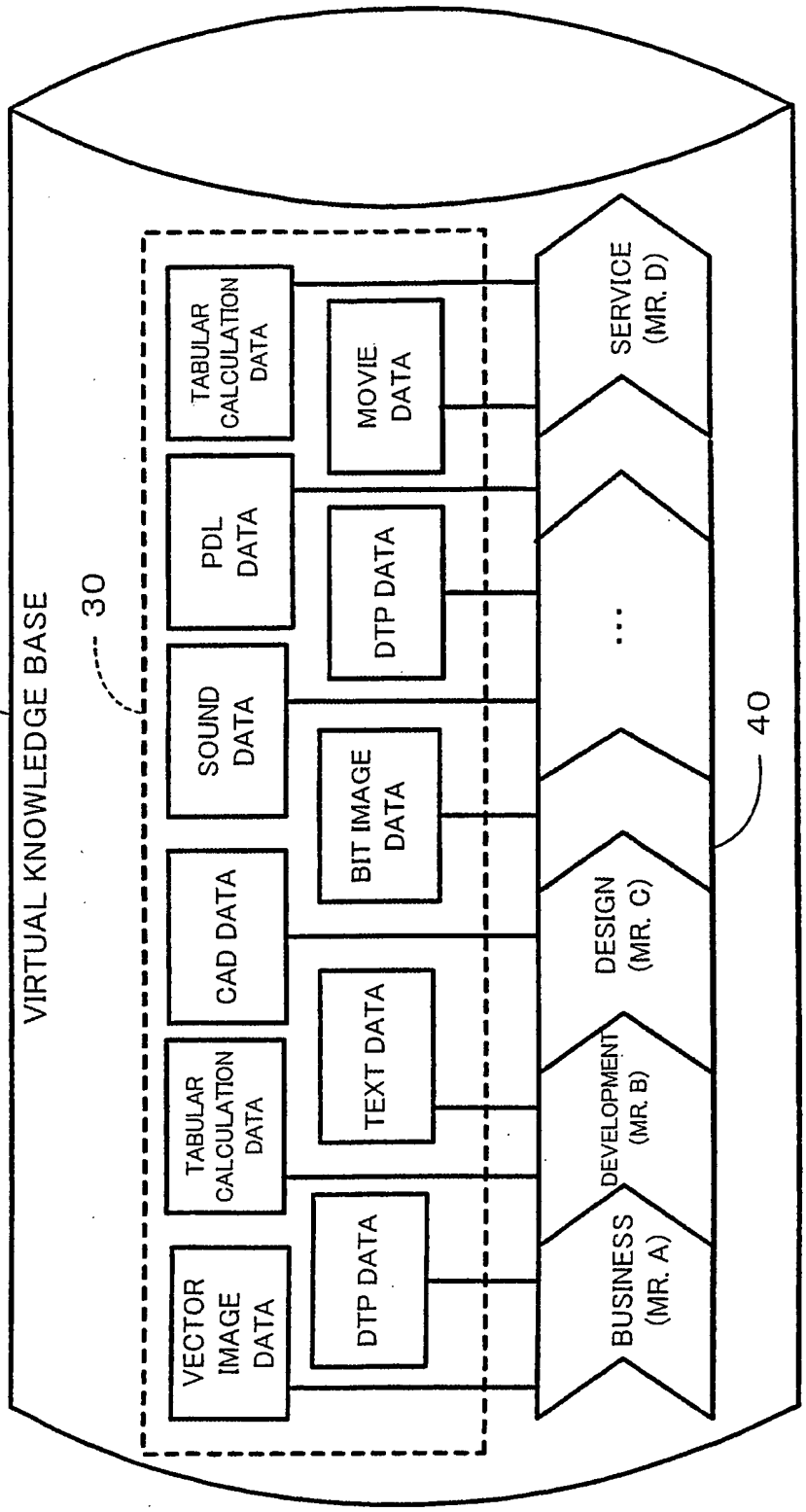
20
VIRTUAL KNOWLEDGE BASE
30
VECTOR IMAGE DATA
TABULAR CALCULATION DATA
CAD DATA
SOUND DATA
PDL DATA
TABULAR CALCULATION DATA
DTP DATA
TEXT DATA
BIT IMAGE DATA
DTP DATA
MOVIE DATA
...
BUSINESS (MR. A)
DEVELOPMENT (MR. B)
DESIGN (MR. C)
SERVICE (MR. D)
40

FIG. 4

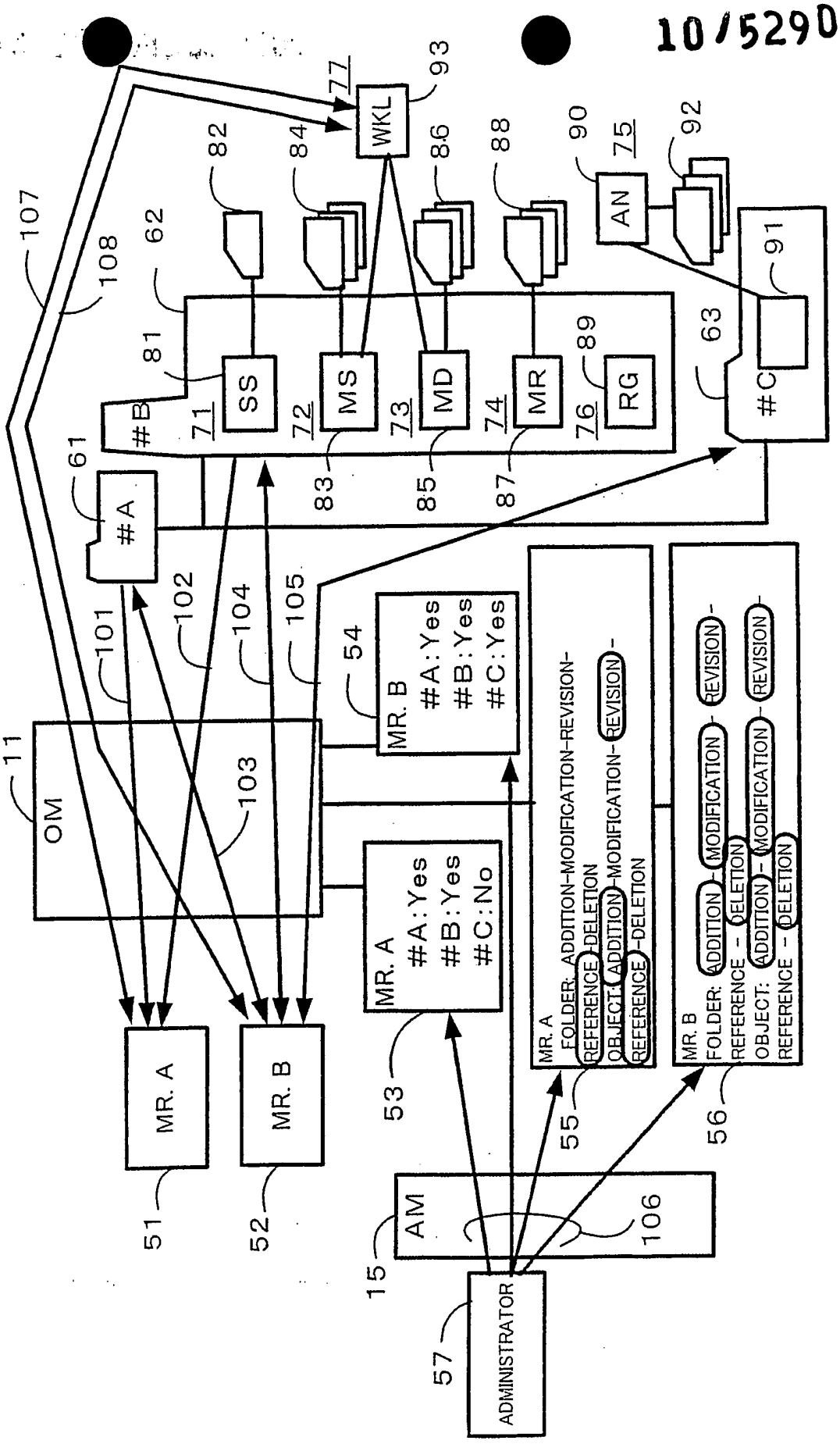
ADMINISTRATOR
57
AM
15
106
OM
11
MR. A
51
MR. B
52
MR. A
#A:Yes
#B:Yes
#C:No
53
MR. B
#A:Yes
#B:Yes
#C:Yes
54
MR. A
FOLDER: ADDITION-MODIFICATION-REVISION-
REFERENCE-DELETION
OBJECT: ADDITION-MODIFICATION-REVISION-
REFERENCE-DELETION
55
MR. B
FOLDER: ADDITION-MODIFICATION-REVISION-
REFERENCE-DELETION
OBJECT: ADDITION-MODIFICATION-REVISION-
REFERENCE-DELETION
56
#A
61
#B
62
#C
63
SS
71
MS
72
MD
73
MR
74
RG
76
AN
75
WKL
77
81
82
83
84
85
86
87
88
89
90
91
92
93
101
102
103
104
105
107
108

FIG. 5

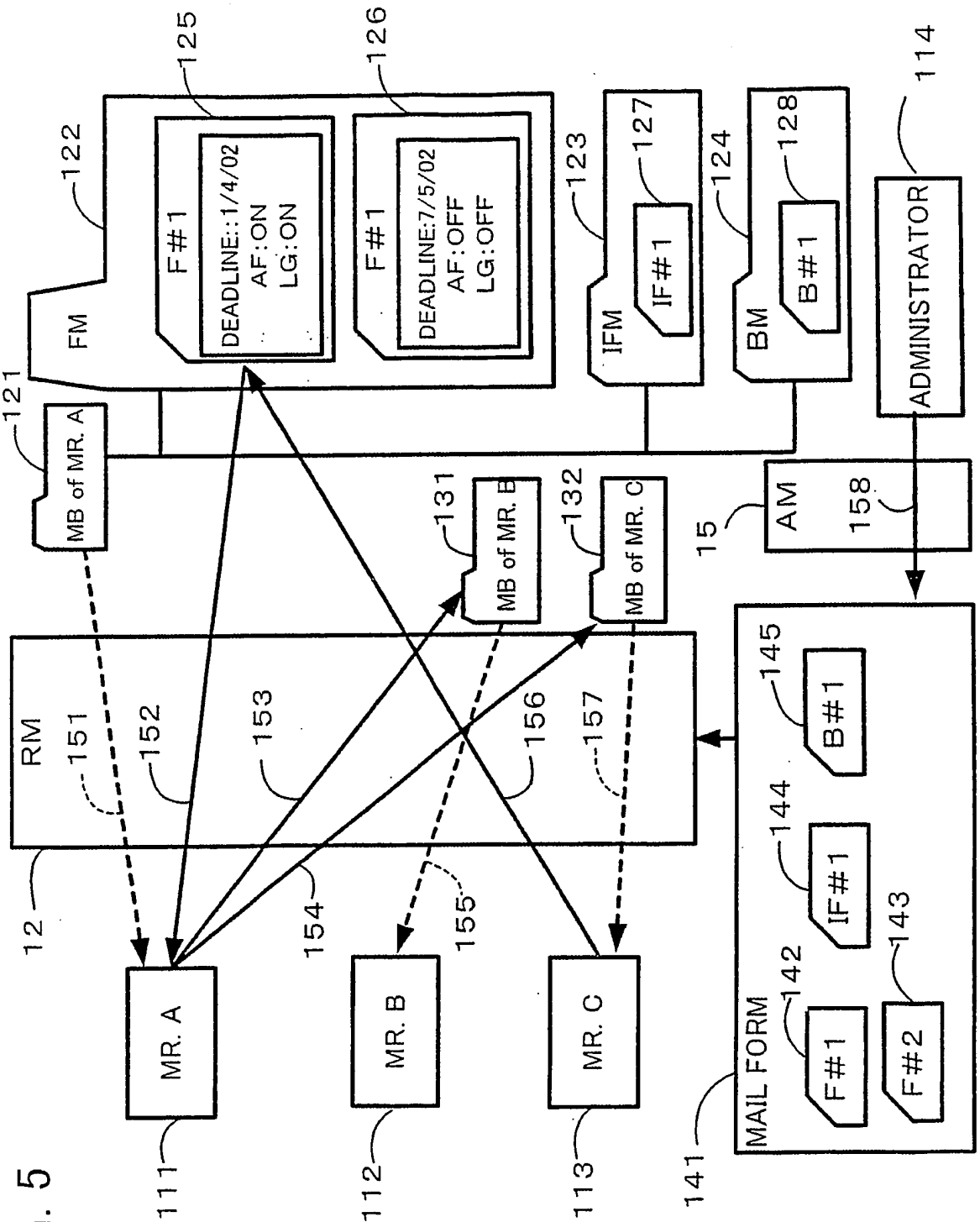
FM
122
F#1
DEADLINE::1/4/02
AF:ON
LG:ON
125
F#1
DEADLINE:7/5/02
AF:OFF
LG:OFF
126
IFM
123
IF#1
127
BM
124
B#1
128
ADMINISTRATOR
114
121
MB of MR. A
131
MB of MR. B
132
MB of MR. C
15
AM
158
RM
151
152
153
156
157
12
154
155
MR. A
MR. B
MR. C
111
112
113
MAIL FORM
141
B#1
145
IF#1
144
F#1
142
F#2
143

FIG. 6

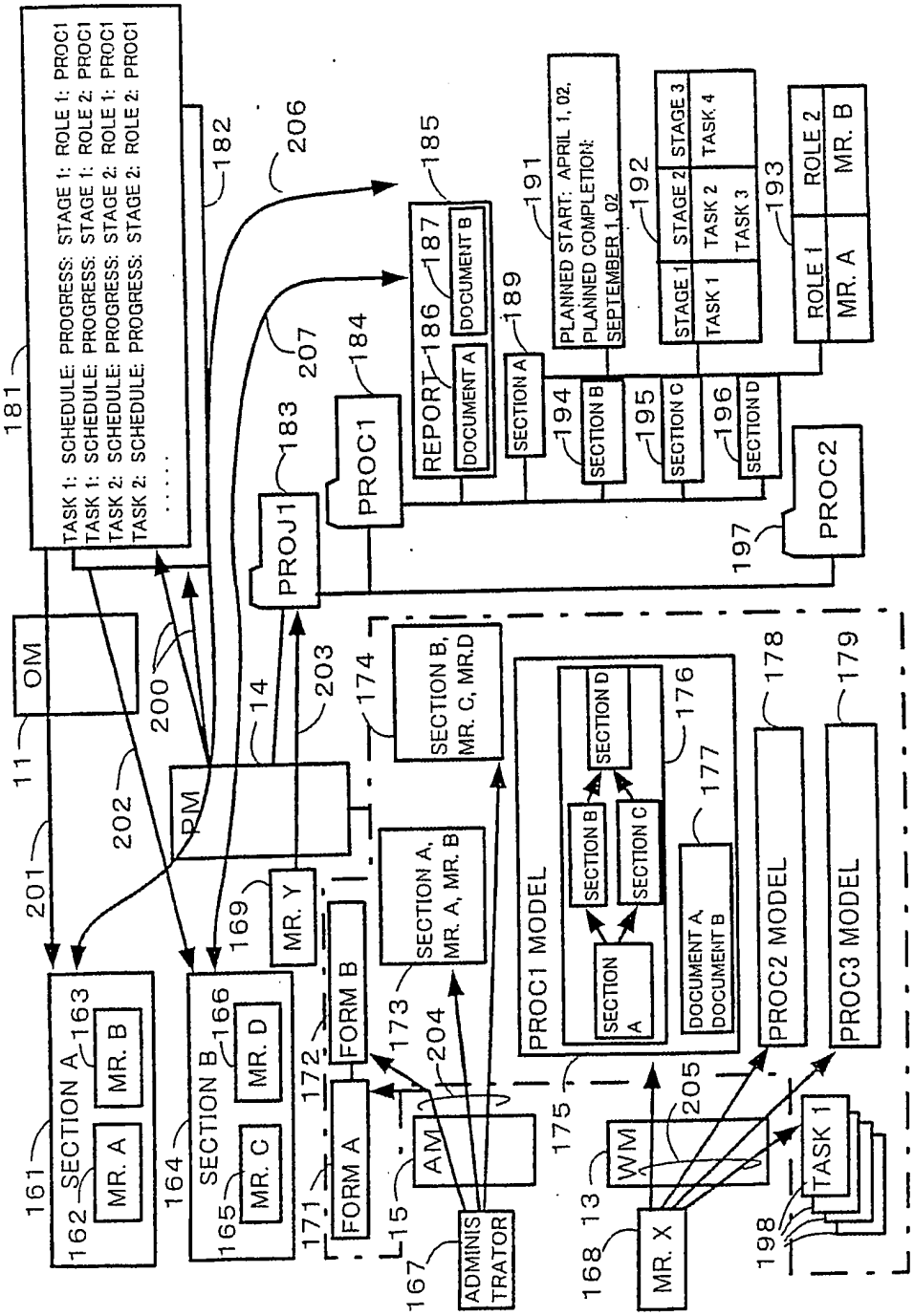
181
TASK 1: SCHEDULE: PROGRESS: STAGE 1: ROLE 1: PROC1
TASK 1: SCHEDULE: PROGRESS: STAGE 1: ROLE 2: PROC1
TASK 2: SCHEDULE: PROGRESS: STAGE 2: ROLE 1: PROC1
TASK 2: SCHEDULE: PROGRESS: STAGE 2: ROLE 2: PROC1
.....
182
206
185
REPORT
186
DOCUMENT A
187
DOCUMENT B
191
PLANNED START: APRIL 1, 02.
PLANNED COMPLETION: SEPTEMBER 1, 02
192
STAGE 1
STAGE 2
STAGE 3
TASK 1
TASK 2
TASK 3
TASK 4
193
ROLE 1
ROLE 2
MR. A
MR. B
189
SECTION A
194
SECTION B
195
SECTION C
196
SECTION D
PROJ1
183
PROC1
184
207
PROC2
197
OM
11
200
PM
14
203
174
SECTION B, MR. C, MR.D
201
202
169
MR. Y
SECTION A, MR. A, MR. B
FORM B
172
173
204
FORM A
171
AM
15
ADMINIS TRATOR
167
161
SECTION A
162
163
MR. A
MR. B
164
SECTION B
165
166
MR. C
MR. D
PROC1 MODEL
175
SECTION A
SECTION B
SECTION C
SECTION D
176
177
DOCUMENT A
DOCUMENT B
PROC2 MODEL
178
PROC3 MODEL
179
WM
205
MR. X
168
13
TASK 1
198

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FIG. 7

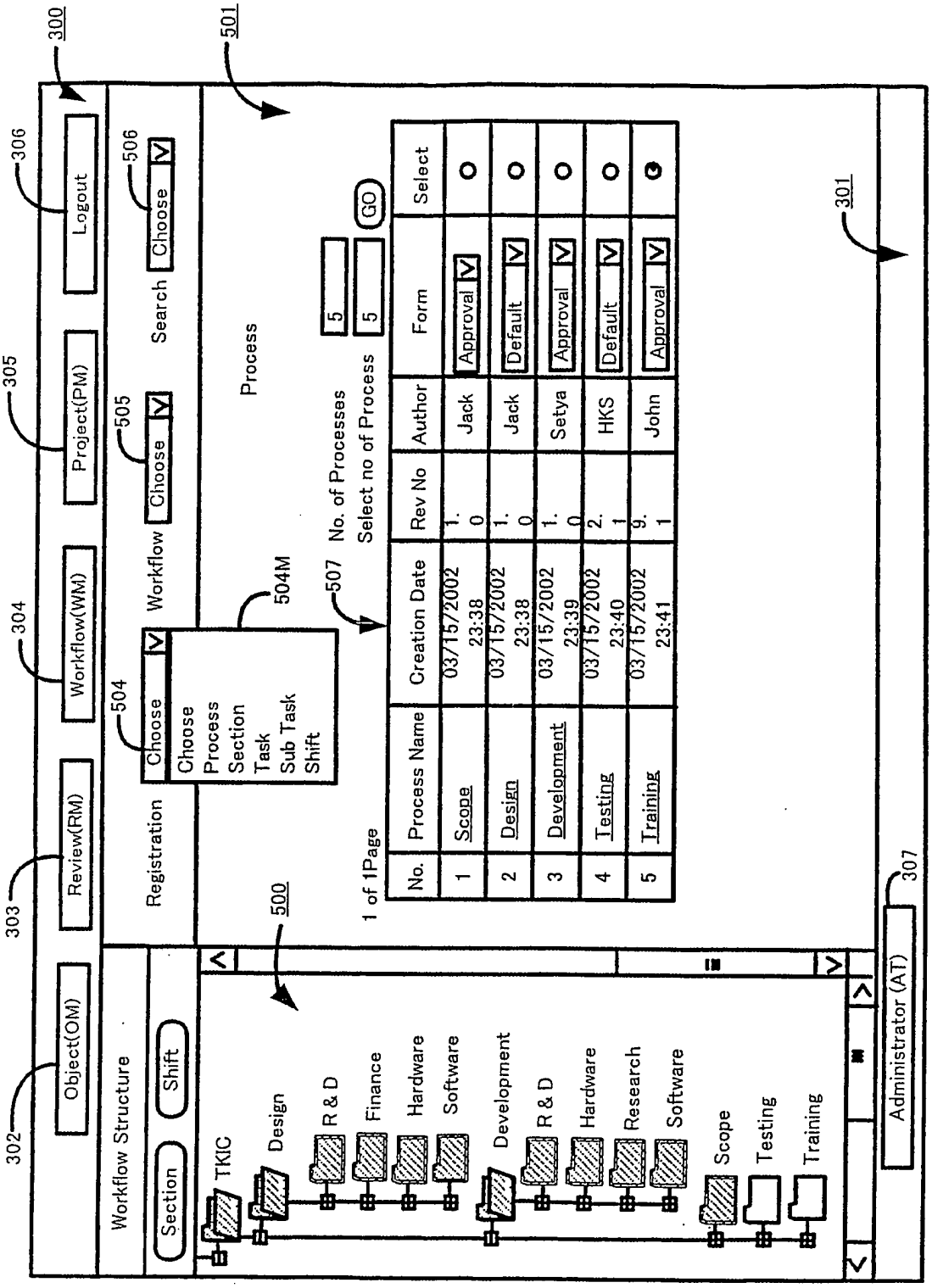

FIG. 8

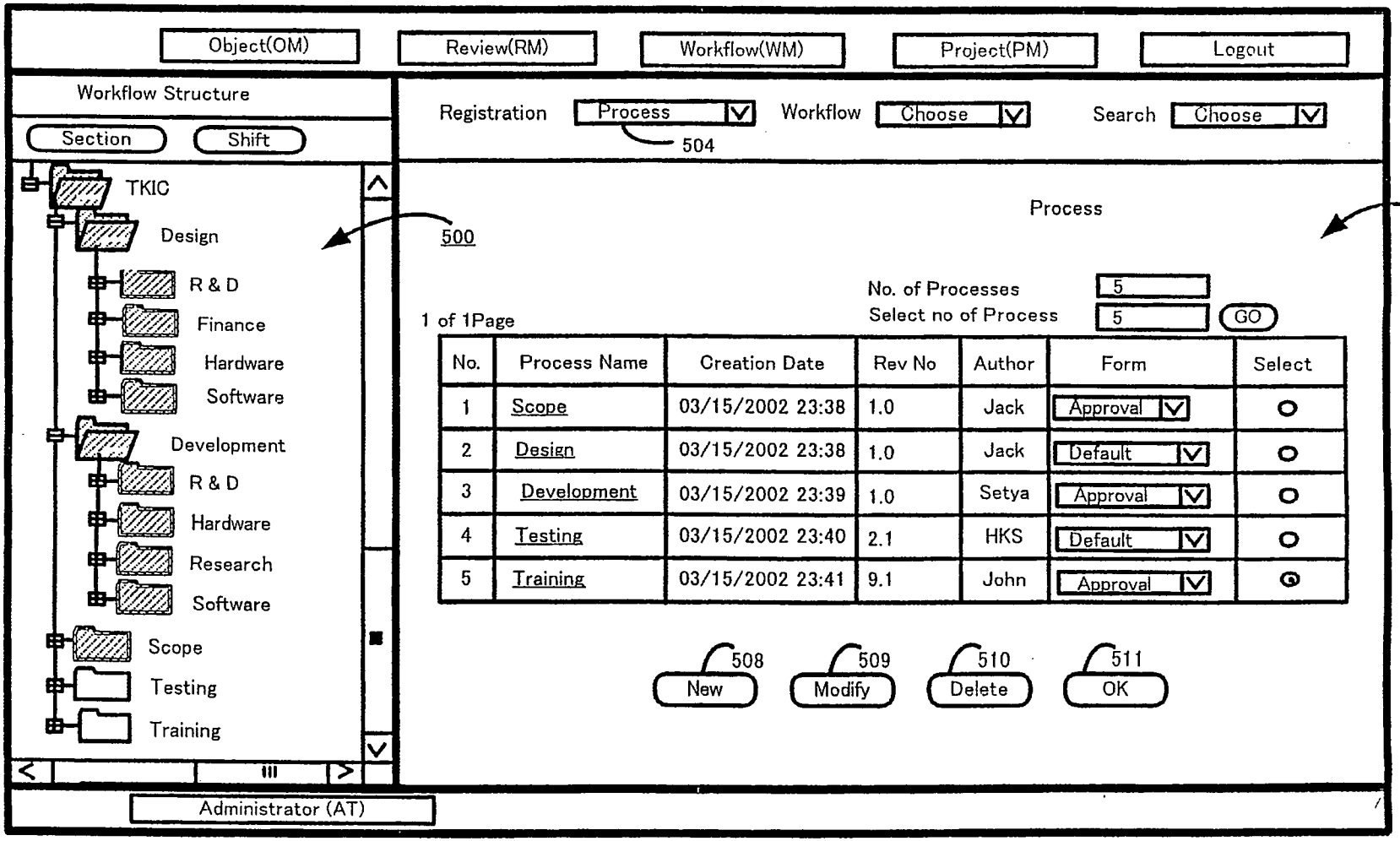

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FIG. 9

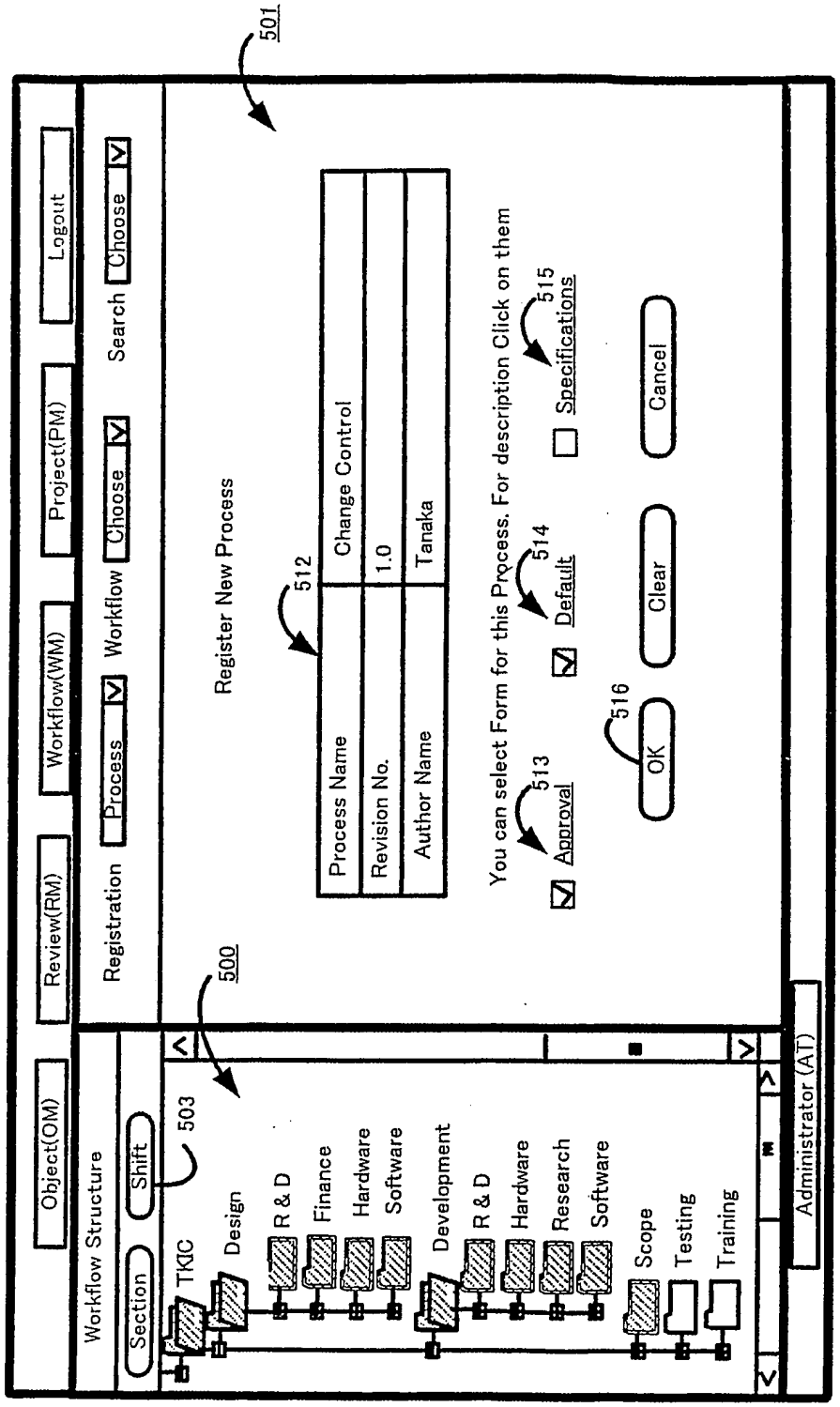
501
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Workflow Structure
Section
Shift
503
500
TKIC
Design
R & D
Finance
Hardware
Software
Development
R & D
Hardware
Research
Software
Scope
Testing
Training
Administrator (AT)
Registration
Process
Workflow
Choose
Search
Choose
Register New Process
512
Process Name
Change Control
Revision No.
1.0
Author Name
Tanaka
You can select Form for this Process. For description Click on them
513
Approval
514
Default
515
Specifications
516
OK
Clear
Cancel

FIG. 10

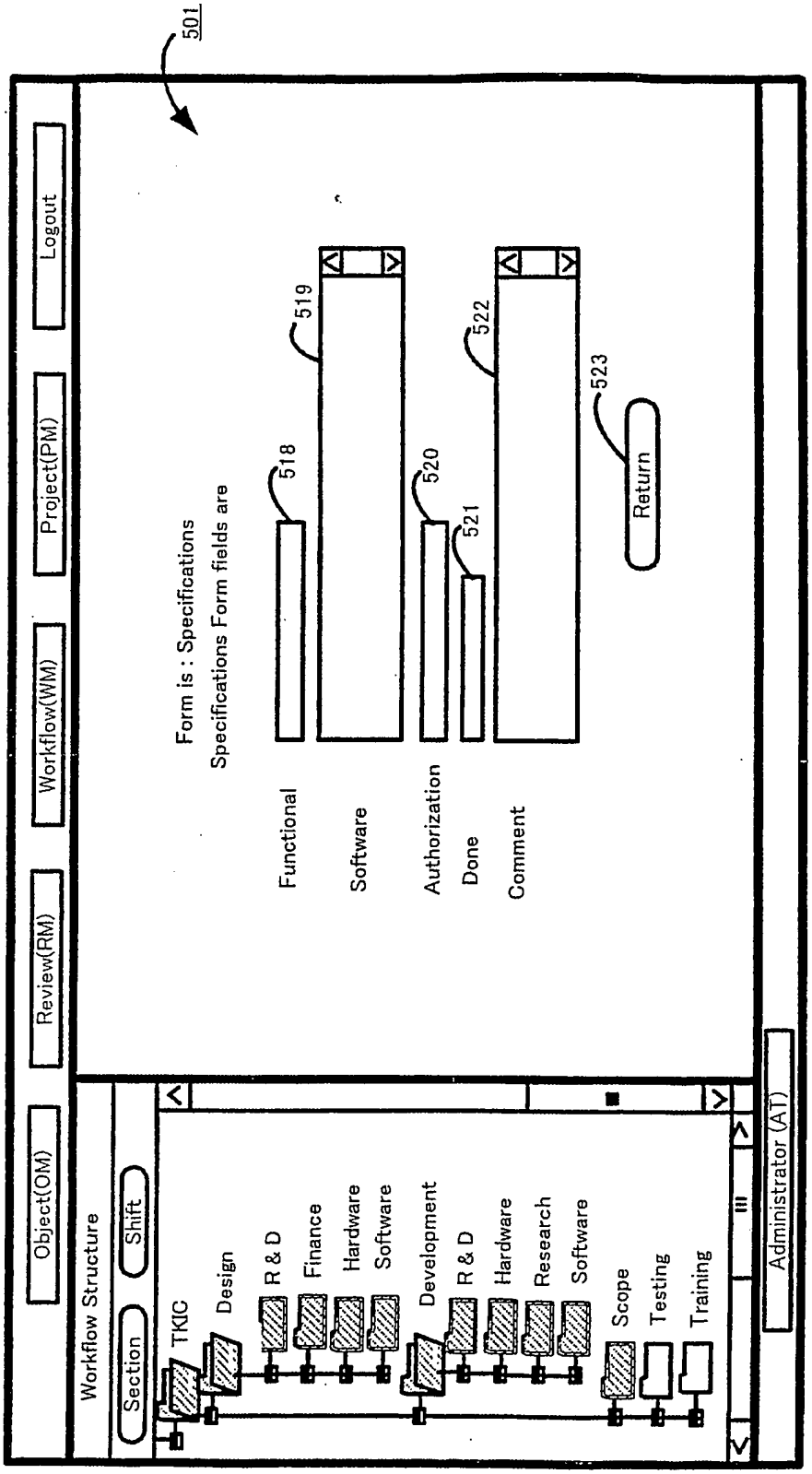
501
Logout
Project(PM)
Workflow(WM)
Review(RM)
Object(OM)
Form is : Specifications
Specifications Form fields are
518
519
520
521
522
523
Functional
Software
Authorization
Done
Comment
Return
Workflow Structure
Section
Shift
TKIC
Design
R & D
Finance
Hardware
Software
Development
R & D
Hardware
Research
Software
Scope
Testing
Training
Administrator (AT)

FIG. 11

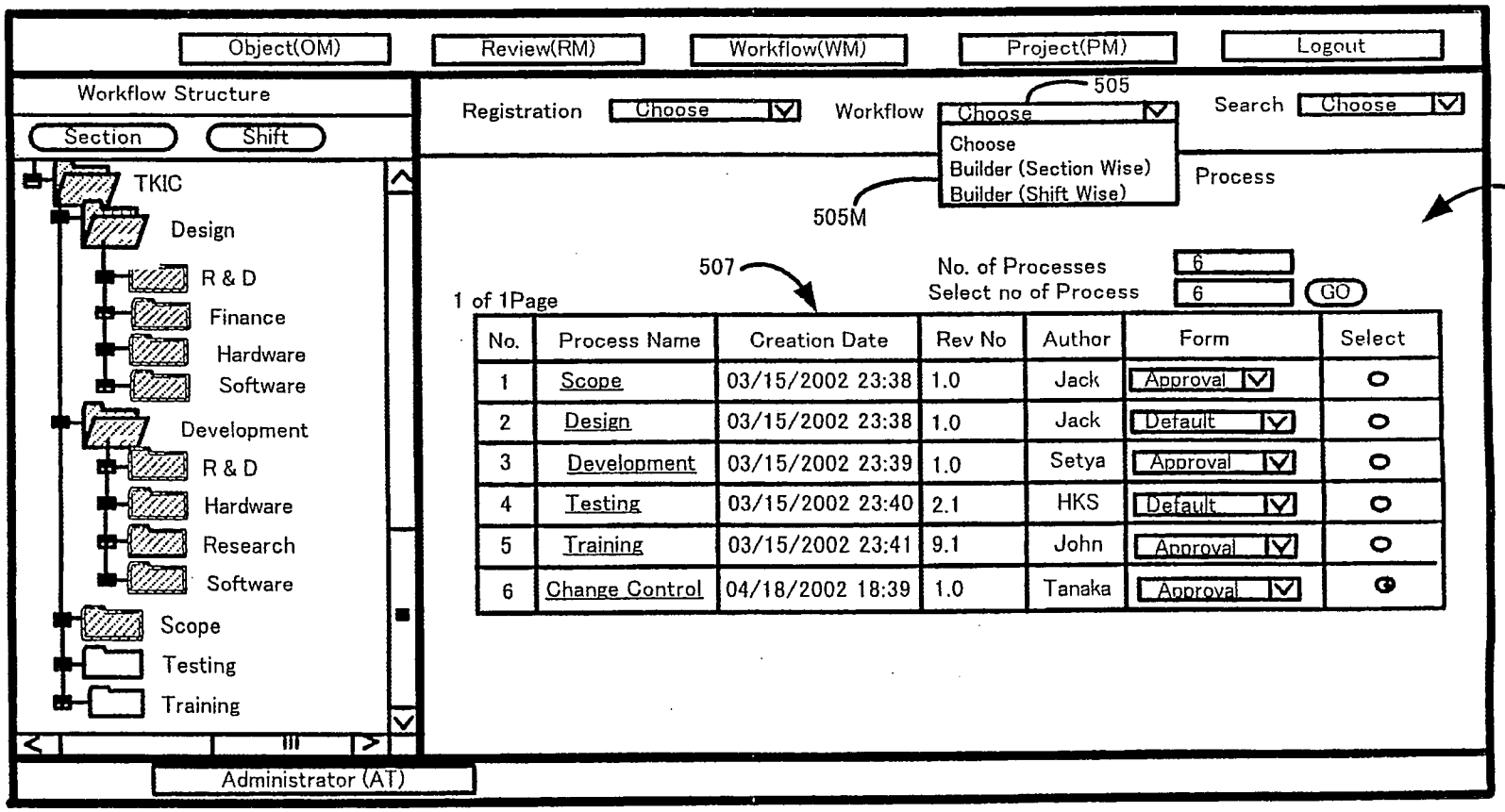

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FIG. 12

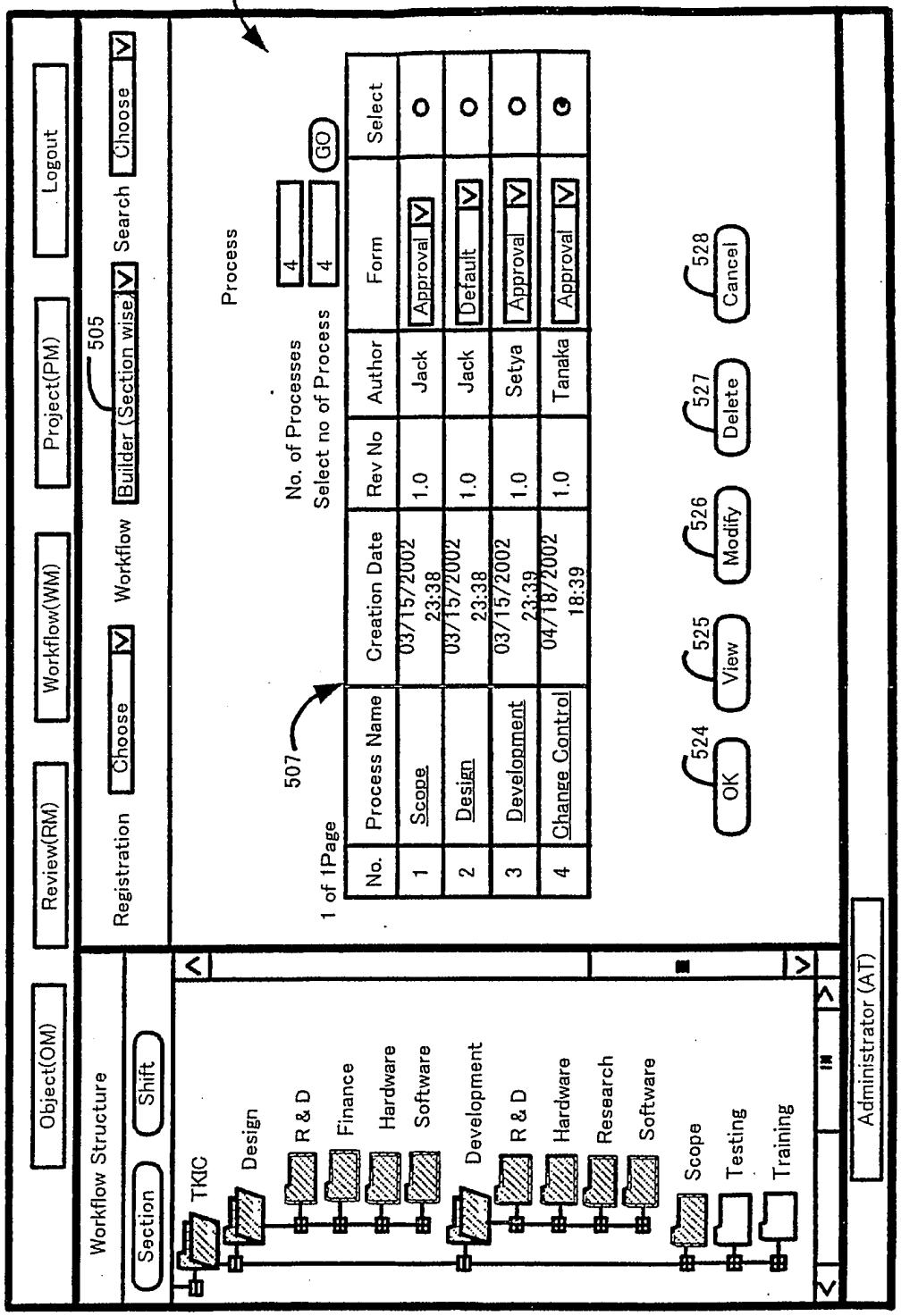
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Workflow Structure
Section
Shift
TKIC
Design
R & D
Finance
Hardware
Software
Development
R & D
Hardware
Research
Software
Scope
Testing
Training
Registration
Choose
Workflow
Builder (Section wise)
Search
Choose
505
501
Process
No. of Processes
Select no of Process
4
4
GO
507
1 of 1Page
No.
Process Name
Creation Date
Rev No
Author
Form
Select
1
Scope
03/15/2002 23:38
1.0
Jack
Approval
2
Design
03/15/2002 23:38
1.0
Jack
Default
3
Development
03/15/2002 23:39
1.0
Setya
Approval
4
Change Control
04/18/2002 18:39
1.0
Tanaka
Approval
524
OK
525
View
526
Modify
527
Delete
528
Cancel
Administrator (AT)

FIG. 13

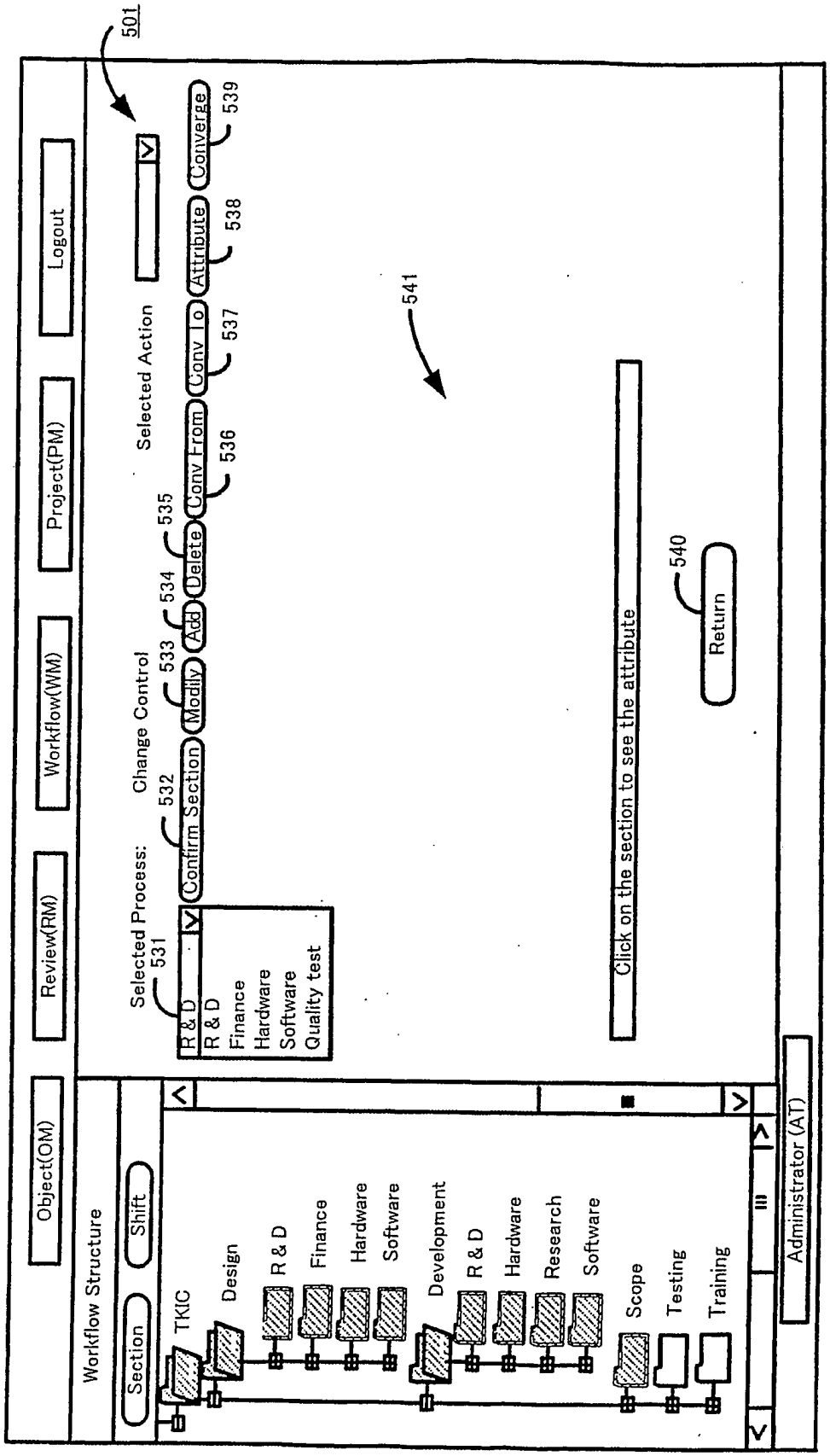
501
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Workflow Structure
Section
Shift
TKIC
Design
R & D
Finance
Hardware
Software
Development
R & D
Hardware
Research
Software
Scope
Testing
Training
Administrator (AT)
Selected Process:
531
R & D
R & D
Finance
Hardware
Software
Quality test
Change Control
532
Confirm Section
533
Modify
534
Add
535
Delete
536
Conv From
537
Conv To
538
Attribute
539
Converge
Selected Action
541
Click on the section to see the attribute
540
Return

FIG. 14

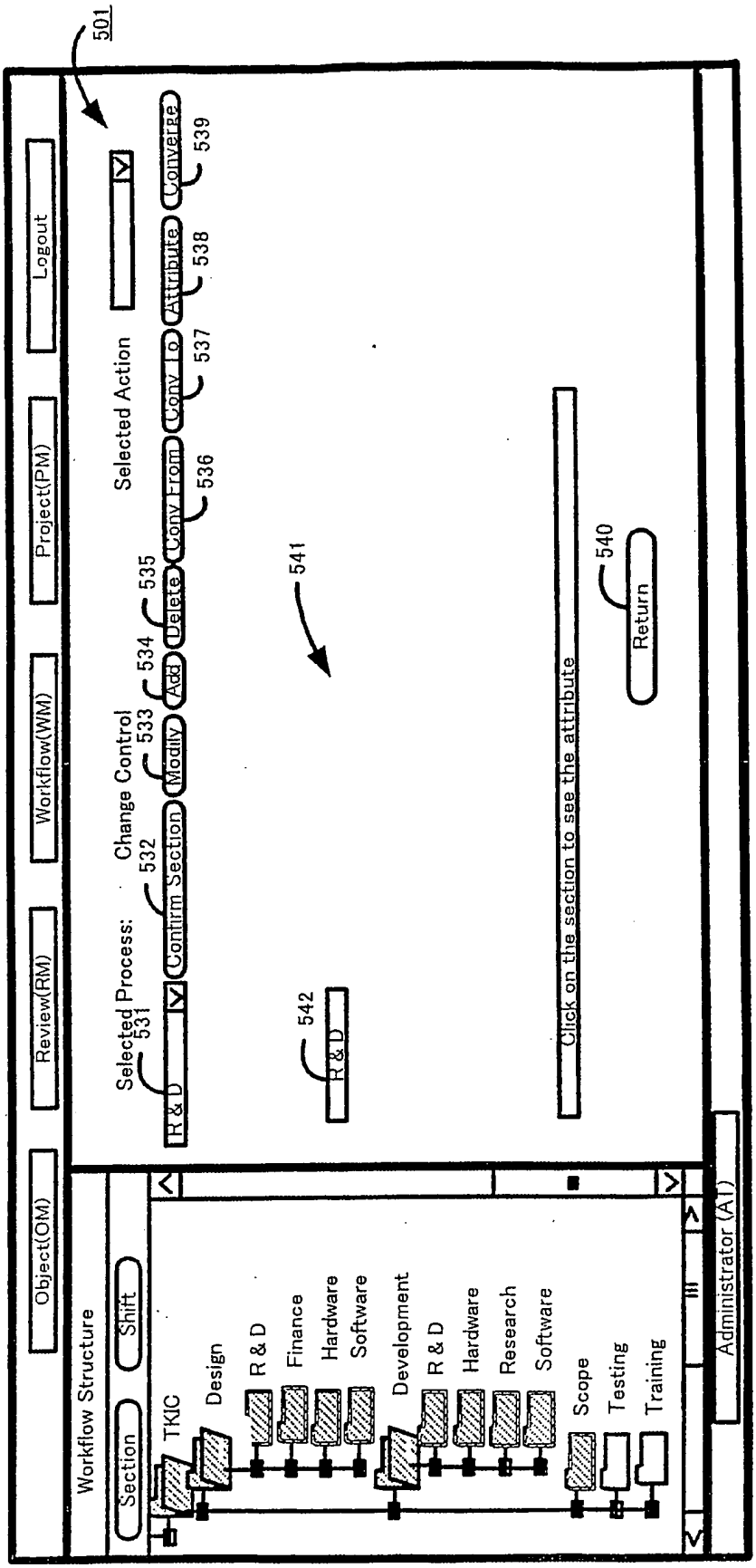
501
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Workflow Structure
Section
Shift
TKIC
Design
R & D
Finance
Hardware
Software
Development
R & D
Hardware
Research
Software
Scope
Testing
Training
Administrator (AT)
Selected Process:
531
R & D
Confirm Section
532
Change Control
533
Modify
534
Add
535
Delete
536
Conv From
537
Conv To
538
Attribute
539
Converge
Selected Action
541
542
R & D
Click on the section to see the attribute
540
Return

FIG. 15

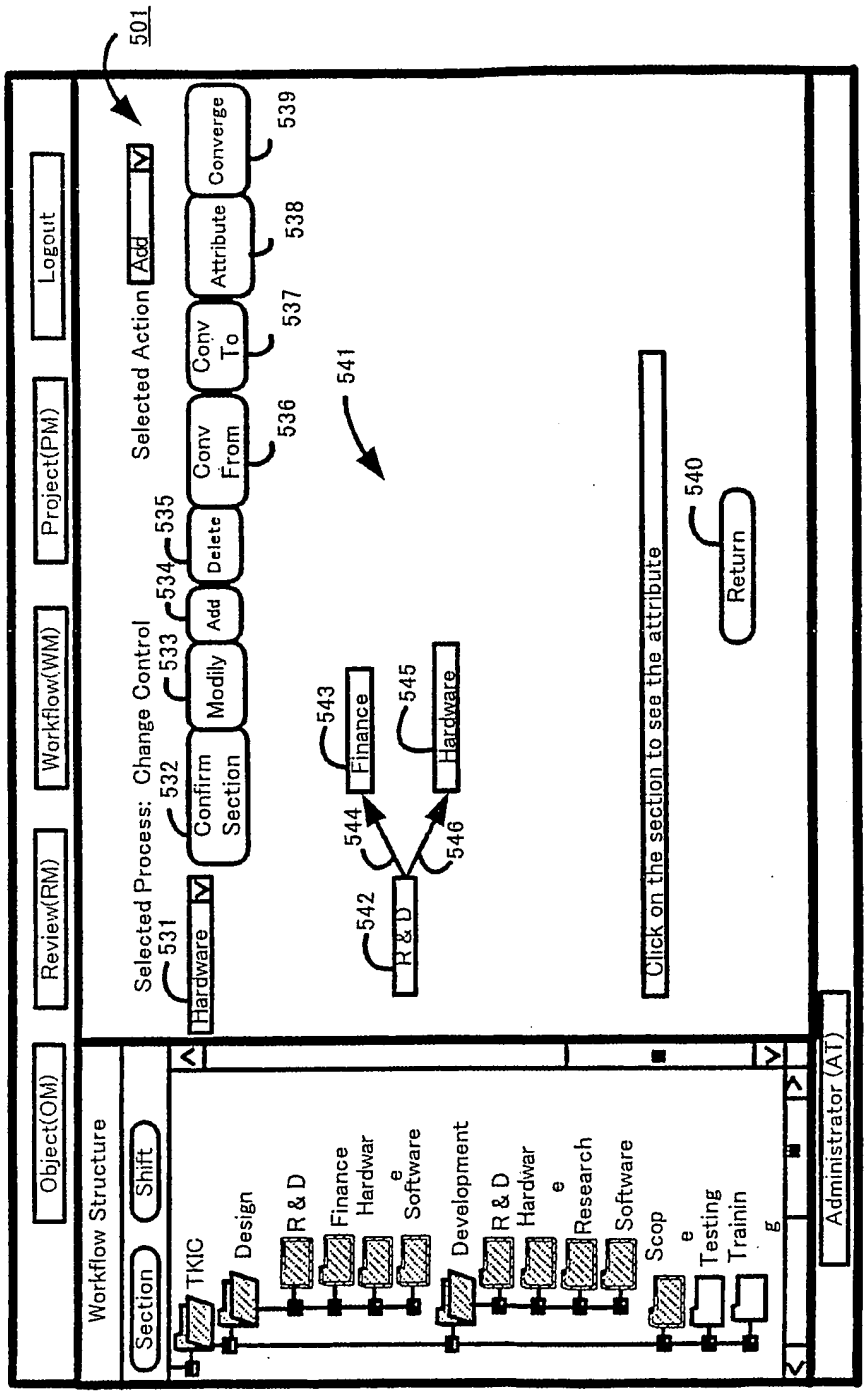
501
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Workflow Structure
Section
Shift
TKIC
Design
R & D
Finance
Hardwar
e
Software
Development
R & D
Hardwar
e
Research
Software
Scop
e
Testing
Trainin
g
Administrator (AT)
Selected Process: Change Control
Selected Action
Add
Hardware
531
Confirm Section
532
Modily
533
Add
534
Delete
535
Conv From
536
Conv To
537
Attribute
538
Converge
539
541
R & D
542
Finance
543
544
Hardware
545
546
Click on the section to see the attribute
Return
540

FIG. 16

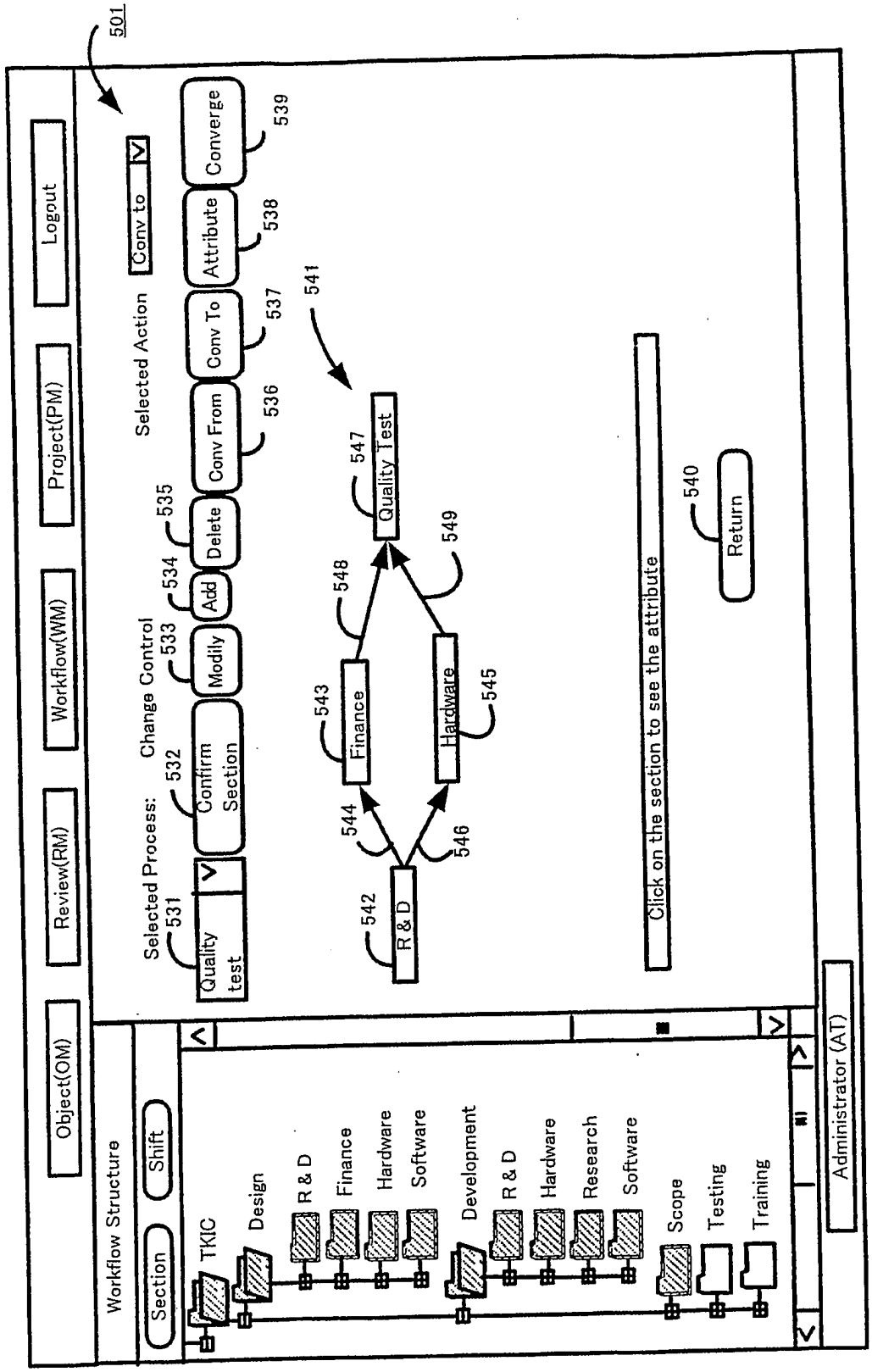
501
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Workflow Structure
Section
Shift
TKIC
Design
R & D
Finance
Hardware
Software
Development
R & D
Hardware
Research
Software
Scope
Testing
Training
Administrator (AT)
Selected Process:
Change Control
Selected Action
Conv to
Quality test
Confirm Section
Modify
Add
Delete
Conv From
Conv To
Attribute
Converge
531
532
533
534
535
536
537
538
539
541
R & D
542
Finance
543
544
Hardware
545
546
548
Quality Test
547
549
Click on the section to see the attribute
Return
540

FIG. 17

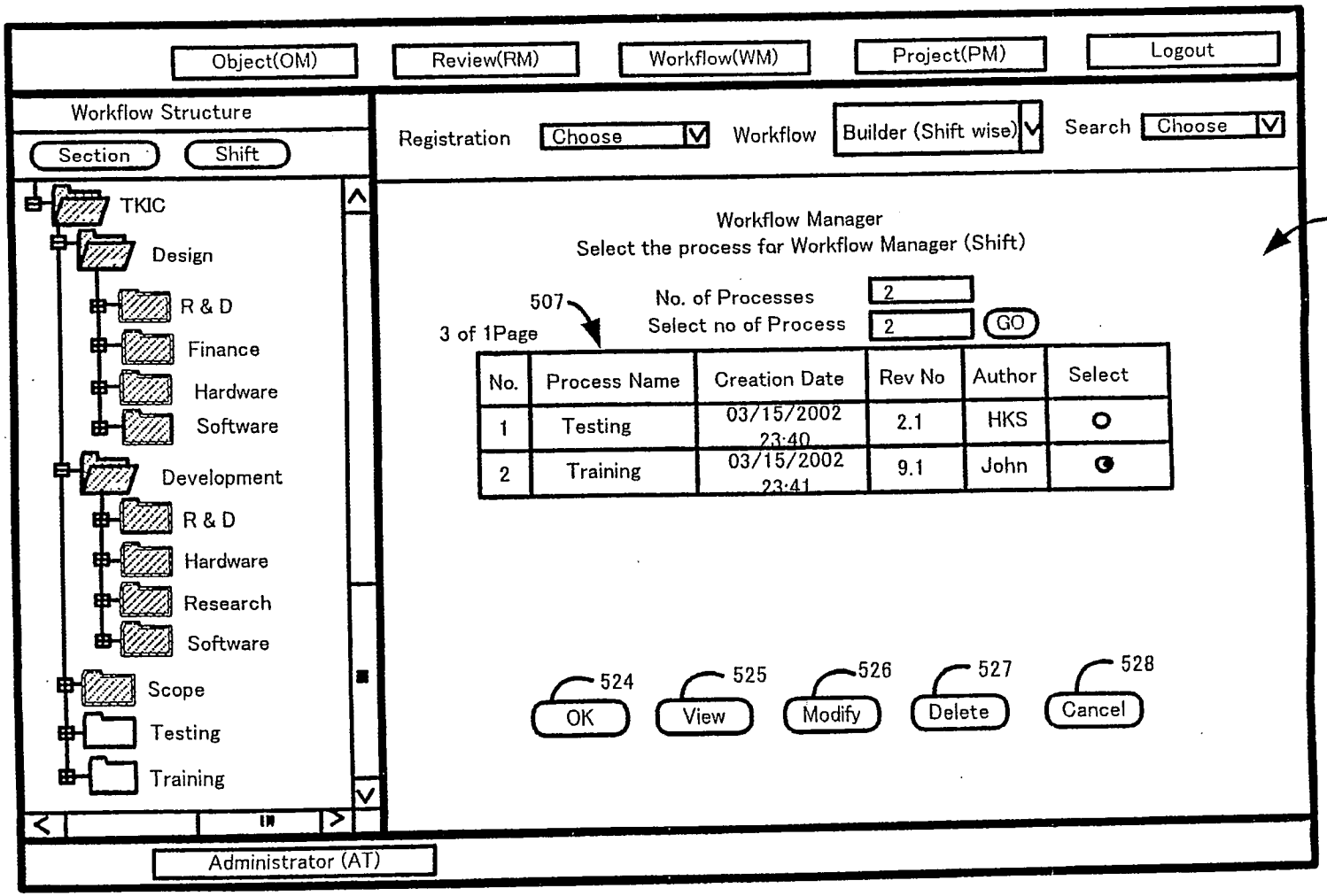

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FIG. 18

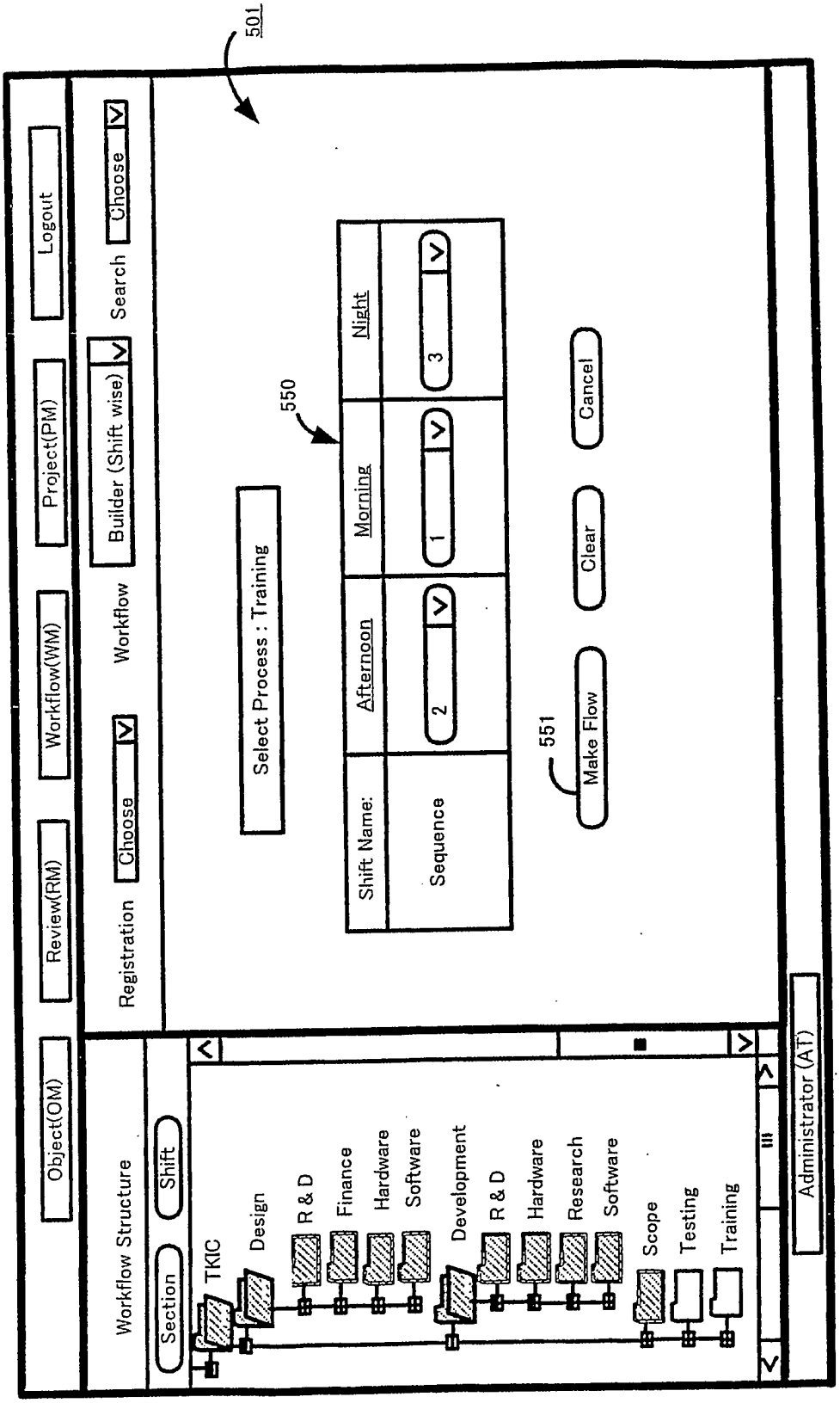
501
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Workflow Structure
Section
Shift
TKIC
Design
R & D
Finance
Hardware
Software
Development
R & D
Hardware
Research
Software
Scope
Testing
Training
Registration
Choose
Workflow
Builder (Shift wise)
Search
Choose
Select Process : Training
550
Shift Name:
Afternoon
Morning
Night
Sequence
2
1
3
551
Make Flow
Clear
Cancel
Administrator (AT)

FIG. 19

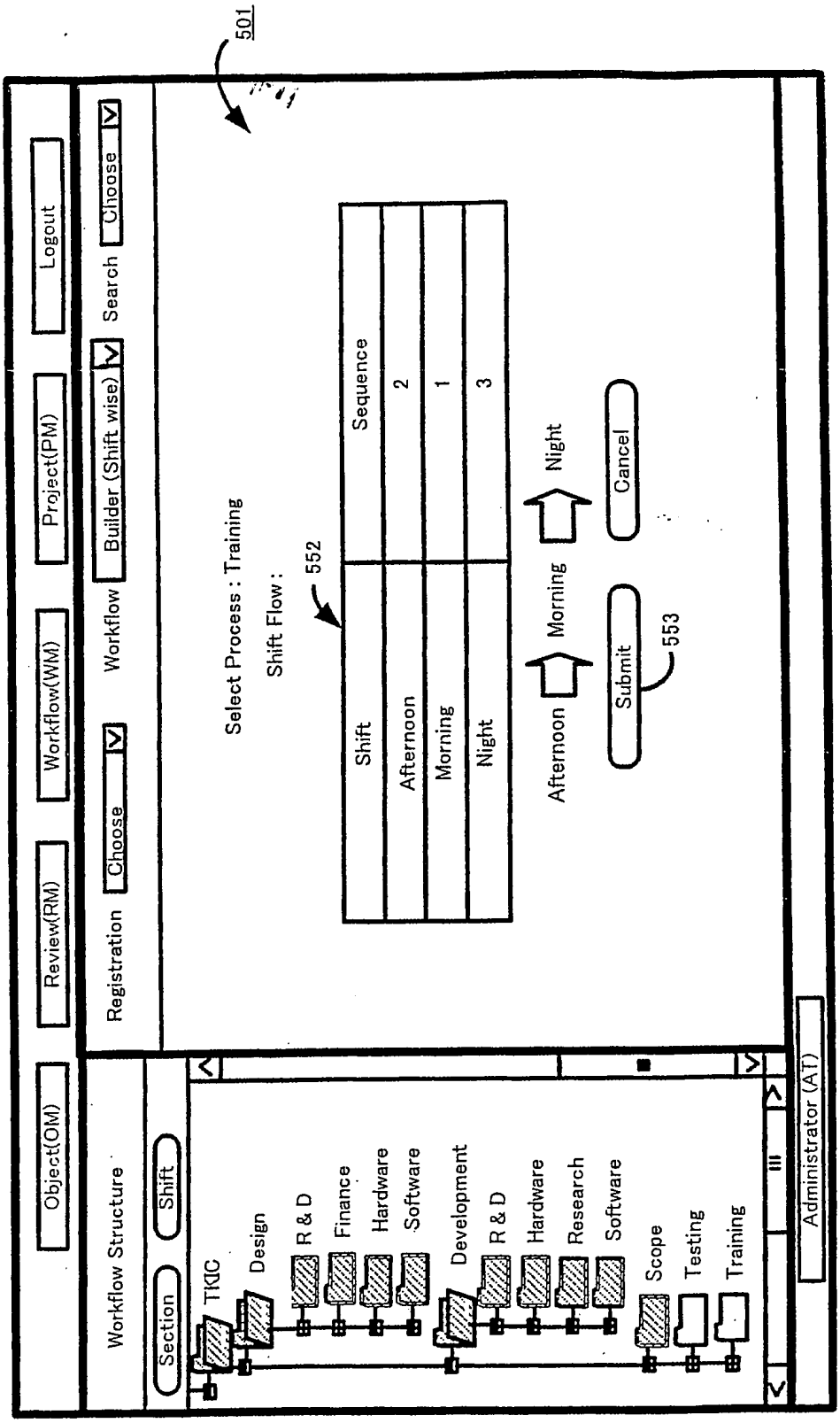
501
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Workflow Structure
Section
Shift
TKIC
Design
R & D
Finance
Hardware
Software
Development
R & D
Hardware
Research
Software
Scope
Testing
Training
Administrator (AT)
Registration
Choose
Workflow
Builder (Shift wise)
Search
Choose
Select Process : Training
Shift Flow :
552
Shift
Sequence
Afternoon
2
Morning
1
Night
3
Afternoon
Morning
Night
Submit
553
Cancel

FIG. 20

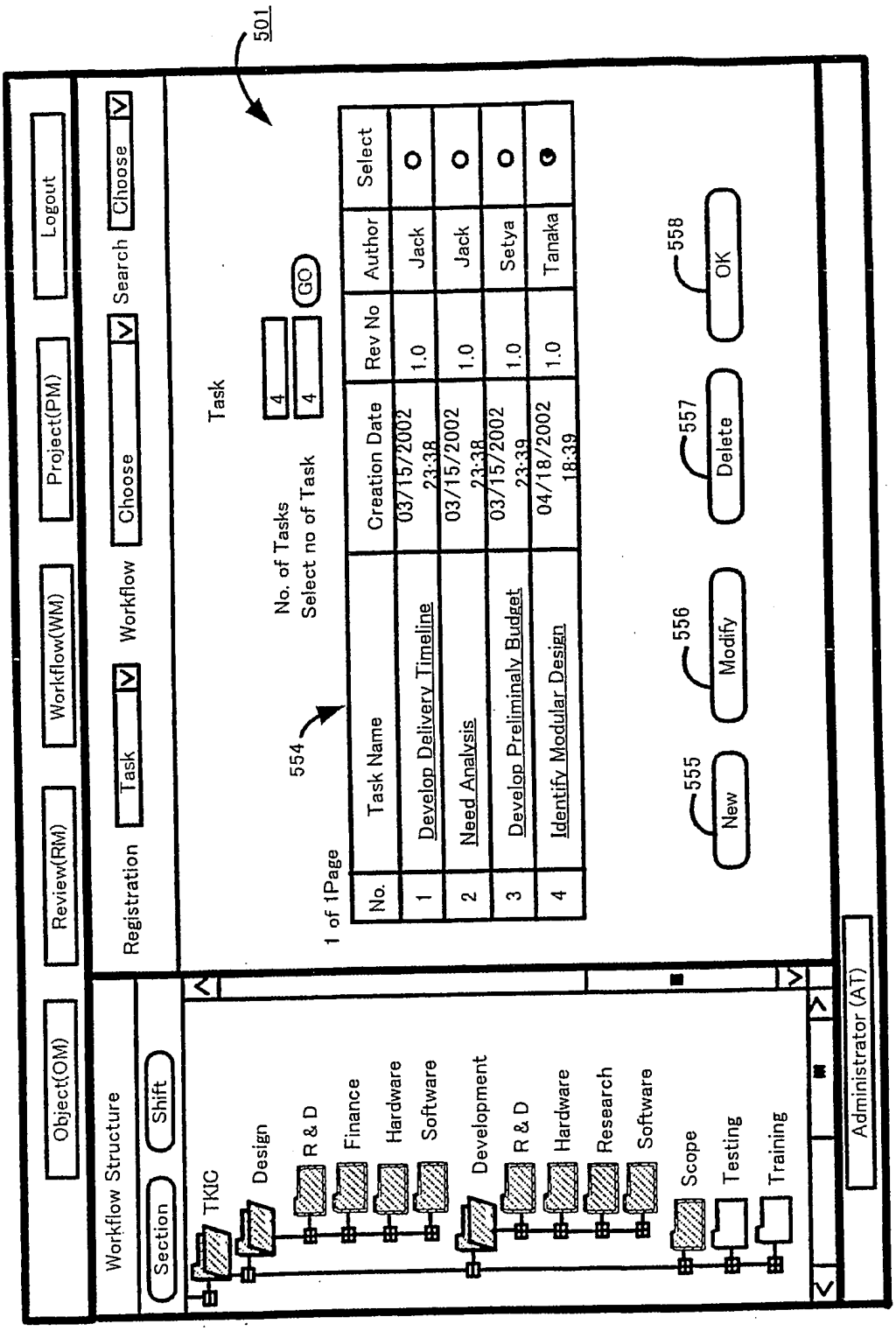
501
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Workflow Structure
Section
Shift
Registration
Task
Workflow
Choose
Search
Choose
TKIC
Design
R & D
Finance
Hardware
Software
Development
R & D
Hardware
Research
Software
Scope
Testing
Training
Task
No. of Tasks
Select no of Task
4
4
GO
554
1 of 1Page
No.
Task Name
Creation Date
Rev No
Author
Select
1
Develop Delivery Timeline
03/15/2002 23:38
1.0
Jack
2
Need Analysis
03/15/2002 23:38
1.0
Jack
3
Develop Preliminaly Budget
03/15/2002 23:39
1.0
Setya
4
Identify Modular Design
04/18/2002 18:39
1.0
Tanaka
555
New
556
Modify
557
Delete
558
OK
Administrator (AT)

FIG. 21

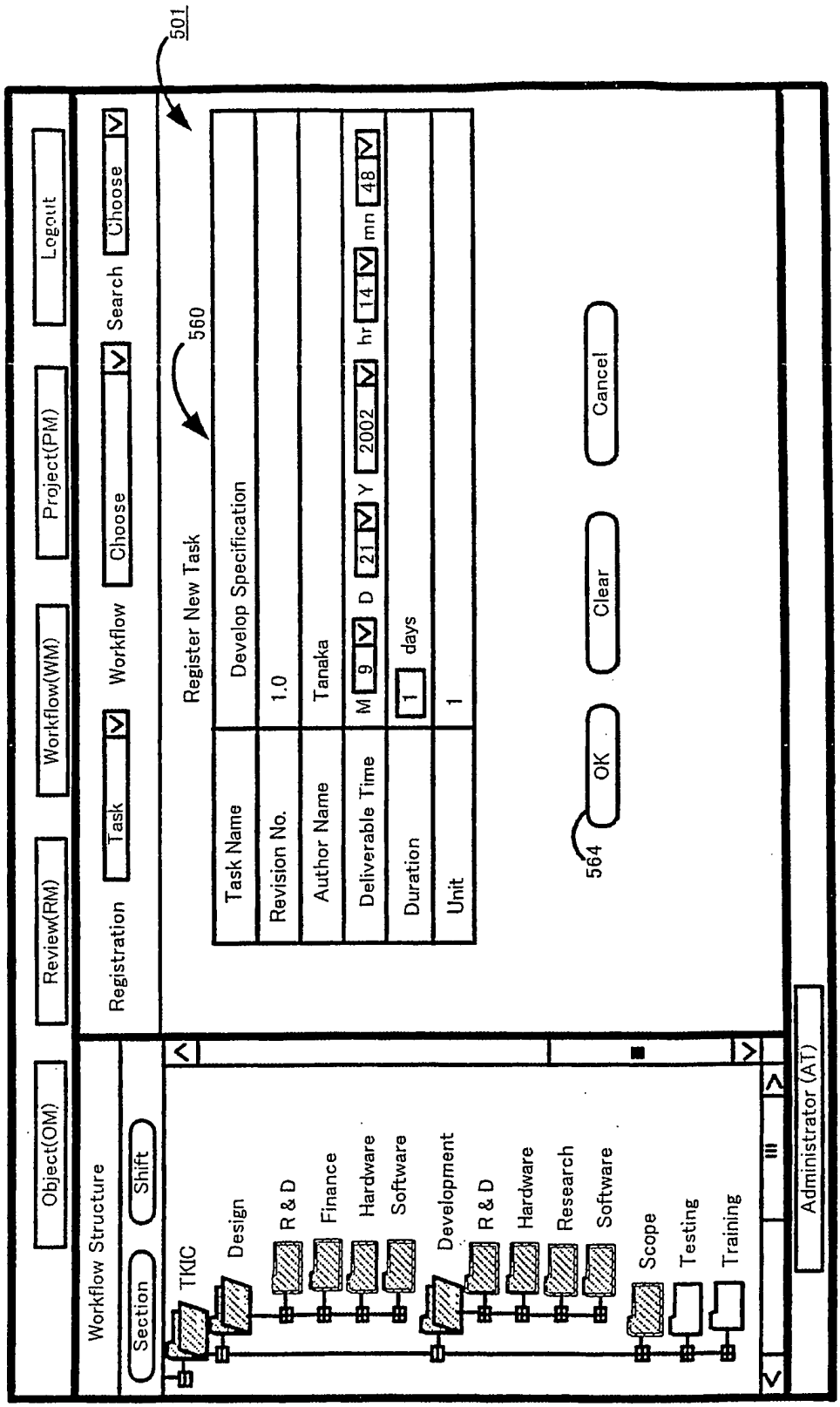
501
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Workflow Structure
Section
Shift
TKIC
Design
R & D
Finance
Hardware
Software
Development
R & D
Hardware
Research
Software
Scope
Testing
Training
Administrator (AT)
Registration
Task
Workflow
Choose
Search
Choose
Register New Task
560
Task Name
Develop Specification
Revision No.
1.0
Author Name
Tanaka
Deliverable Time
M 9 D 21 Y 2002 hr 14 mn 48
Duration
1 days
Unit
1
564
OK
Clear
Cancel

FIG. 22

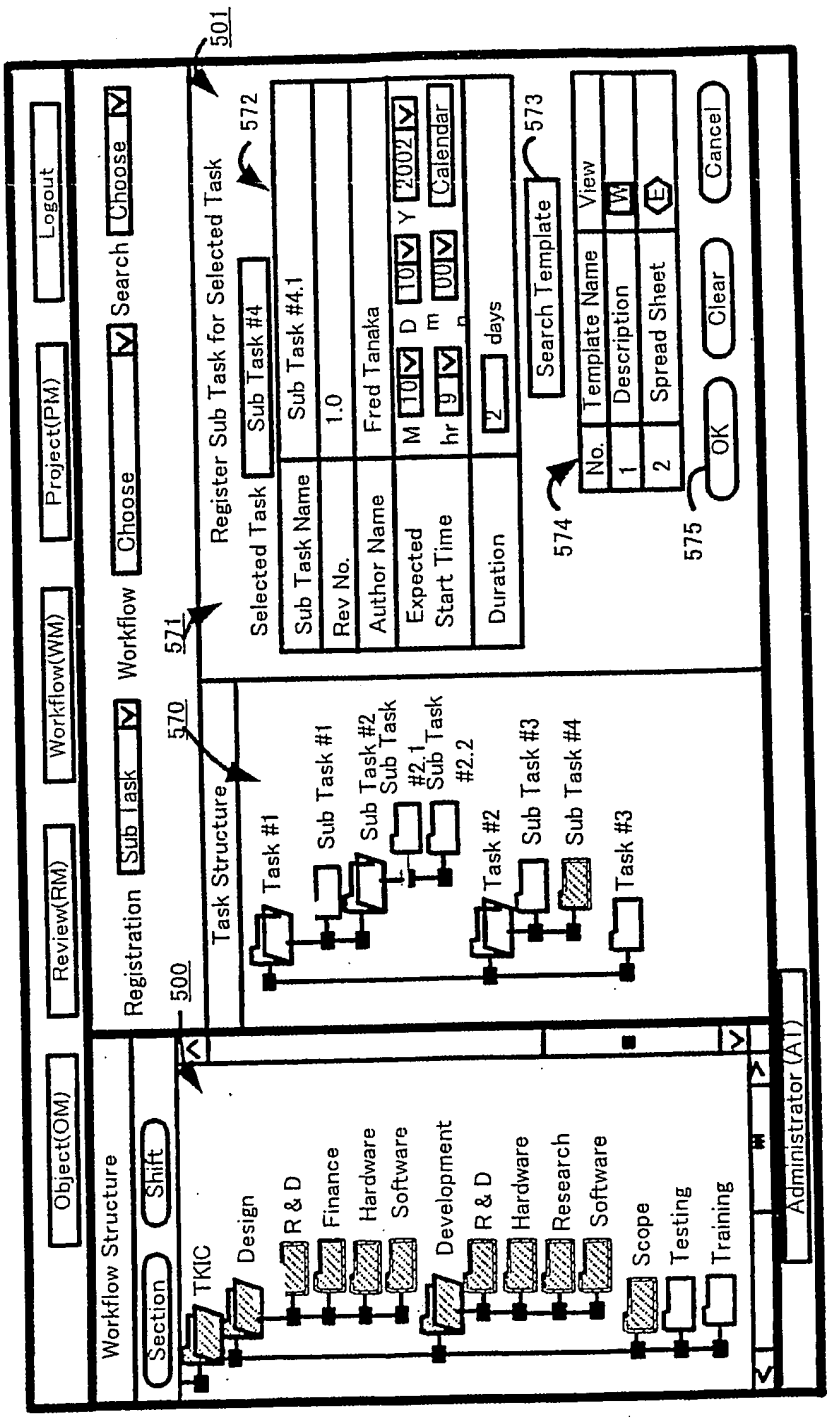
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Workflow Structure
Section
Shift
TKIC
Design
R & D
Finance
Hardware
Software
Development
R & D
Hardware
Research
Software
Scope
Testing
Training
Administrator (A1)
Registration
Sub Task
Workflow
Choose
Search
Choose
500
570
571
501
Task Structure
Task #1
Sub Task #1
Sub Task #2
Sub Task #2.1
Sub Task #2.2
Task #2
Sub Task #3
Sub Task #4
Task #3
Register Sub Task for Selected Task
572
Selected Task
Sub Task #4
Sub Task Name
Sub Task #4.1
Rev No.
1.0
Author Name
Fred Tanaka
Expected Start Time
M 10 D 10 Y 2002
hr 9 m 00 Calendar
Duration
2 days
573
Search Template
574
No.
Template Name
View
1
Description
2
Spread Sheet
575
OK
Clear
Cancel

FIG. 23

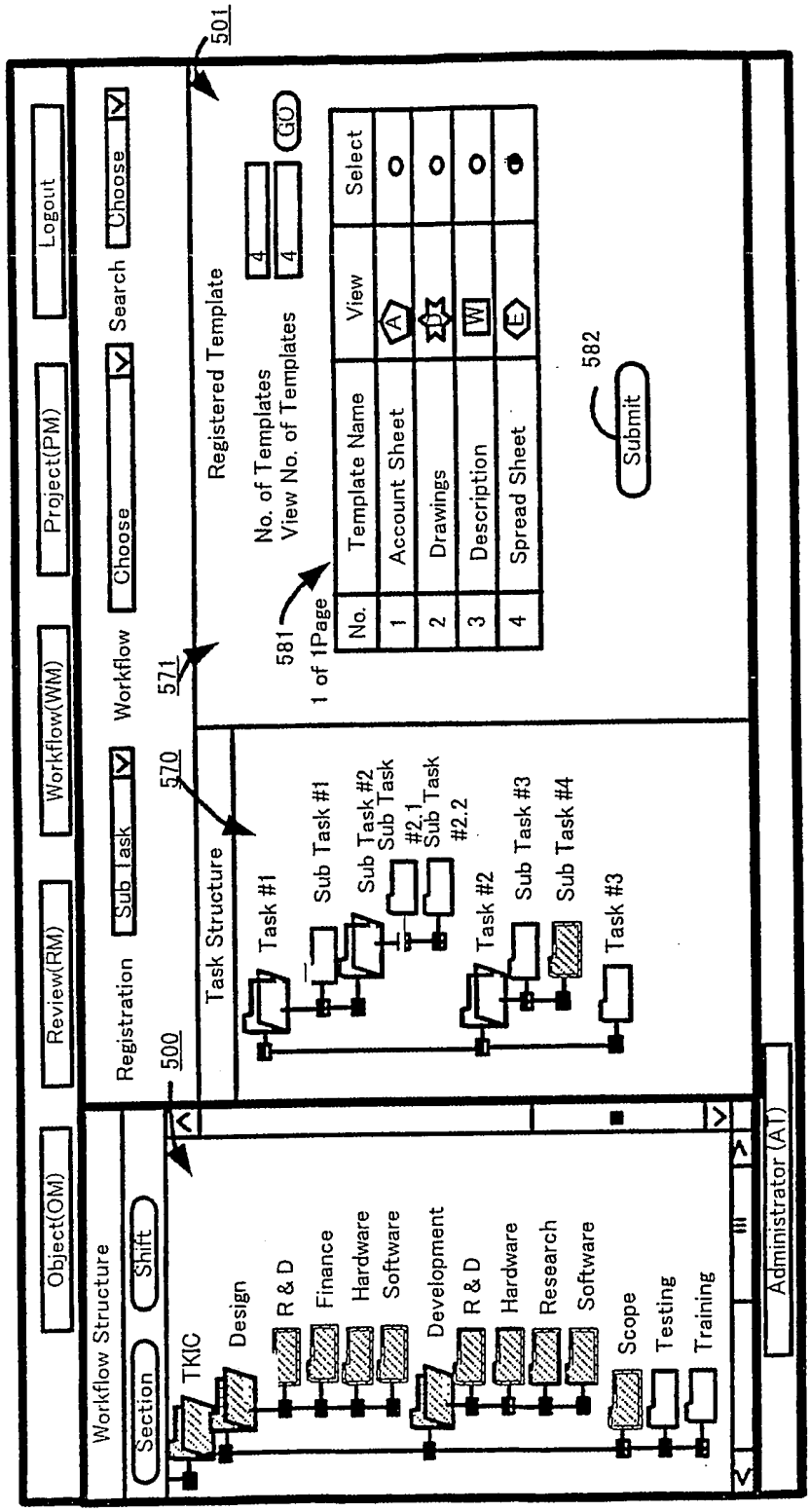
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Workflow Structure
Section
Shift
TKIC
Design
R & D
Finance
Hardware
Software
Development
R & D
Hardware
Research
Software
Scope
Testing
Training
Administrator (AT)
Registration
Sub Task
Workflow
Choose
Search
Choose
500
570
Task Structure
571
Task #1
Sub Task #1
Sub Task #2
Sub Task #2.1
Sub Task #2.2
Task #2
Sub Task #3
Sub Task #4
Task #3
501
Registered Template
No. of Templates
View No. of Templates
4
4
GO
581
1 of 1Page
No.
Template Name
View
Select
1
Account Sheet
2
Drawings
3
Description
4
Spread Sheet
582
Submit

FIG. 24

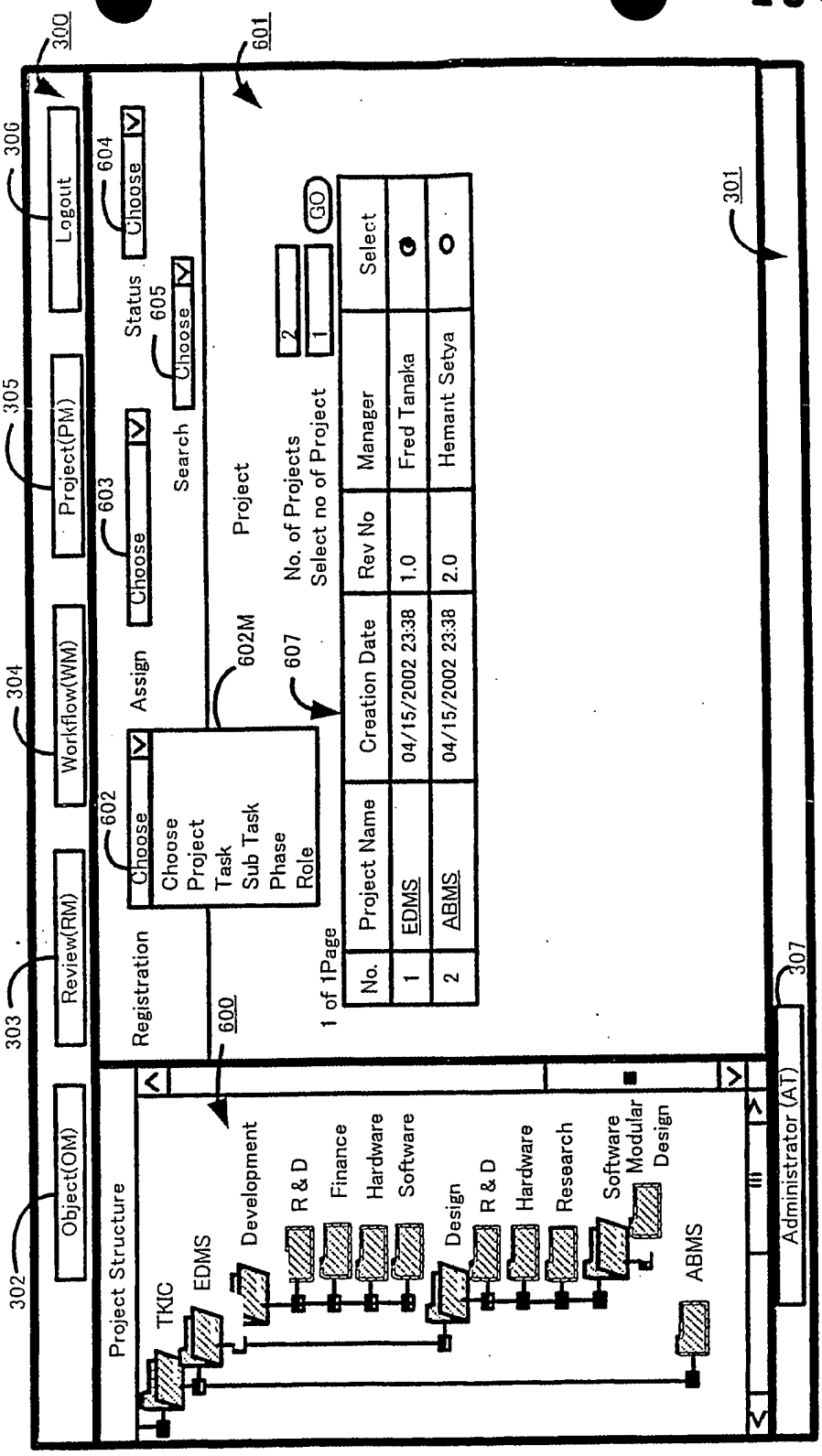
300
301
302
303
304
305
306
307
600
601
602
602M
603
604
605
607
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
Modular
Design
ABMS
Registration
Choose
Choose
Project
Task
Sub Task
Phase
Role
Assign
Choose
Search
Status
Choose
Choose
Project
No. of Projects
Select no of Project
2
1
GO
1 of 1Page
No.
Project Name
Creation Date
Rev No
Manager
Select
1
EDMS
04/15/2002 23:38
1.0
Fred Tanaka
2
ABMS
04/15/2002 23:38
2.0
Hemant Setya
Administrator (AT)

FIG. 25

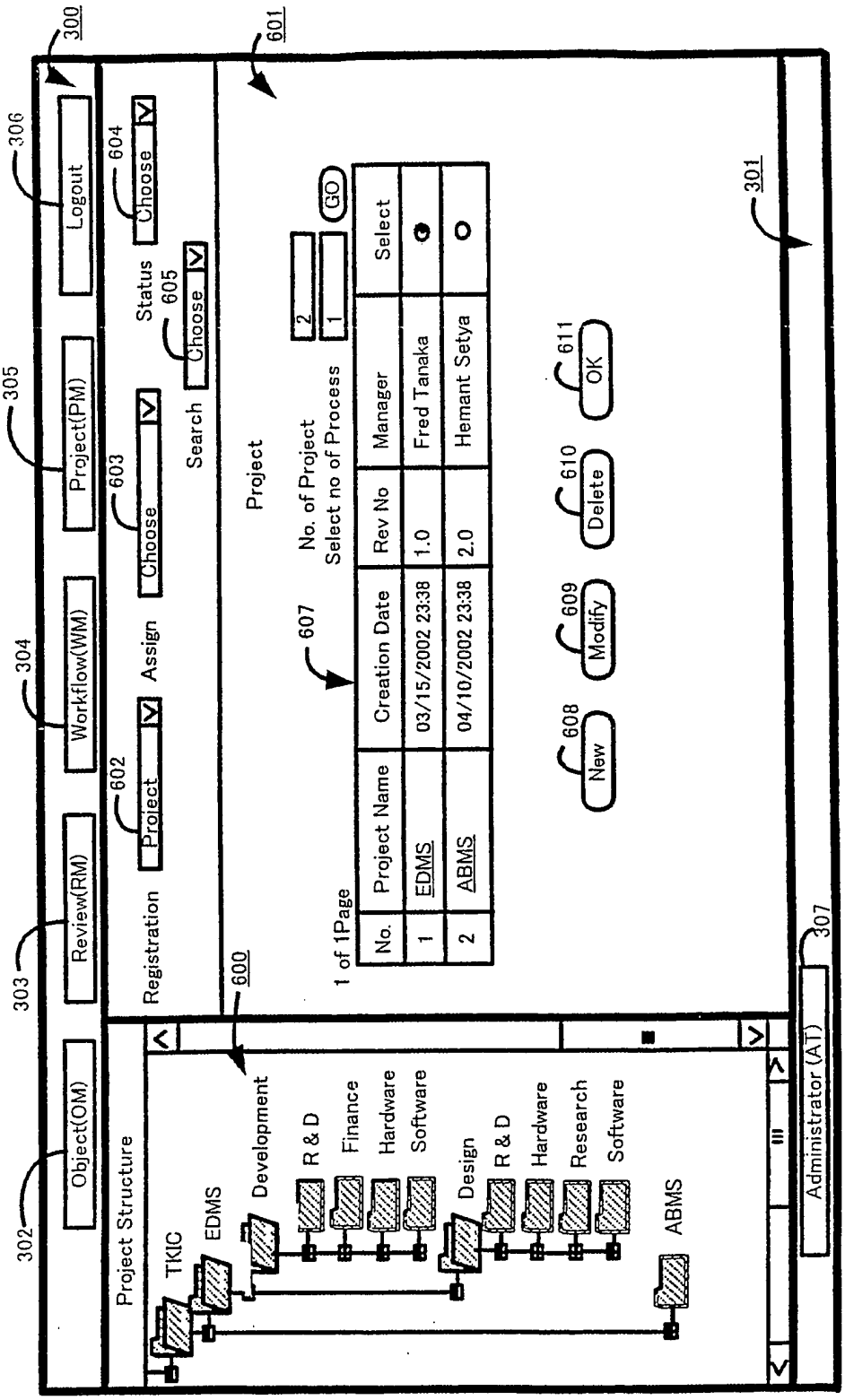
300
306
Logout
601
305
Project(PM)
604
Choose
Status
605
Choose
Search
603
Choose
Assign
304
Workflow(WM)
602
Project
Registration
303
Review(RM)
Object(OM)
302
600
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Project
No. of Project
Select no of Process
2
1
GO
607
1 of 1Page
No.
Project Name
Creation Date
Rev No
Manager
Select
1
EDMS
03/15/2002 23:38
1.0
Fred Tanaka
2
ABMS
04/10/2002 23:38
2.0
Hemant Setya
608
New
609
Modify
610
Delete
611
OK
301
Administrator (AT)
307

FIG. 26

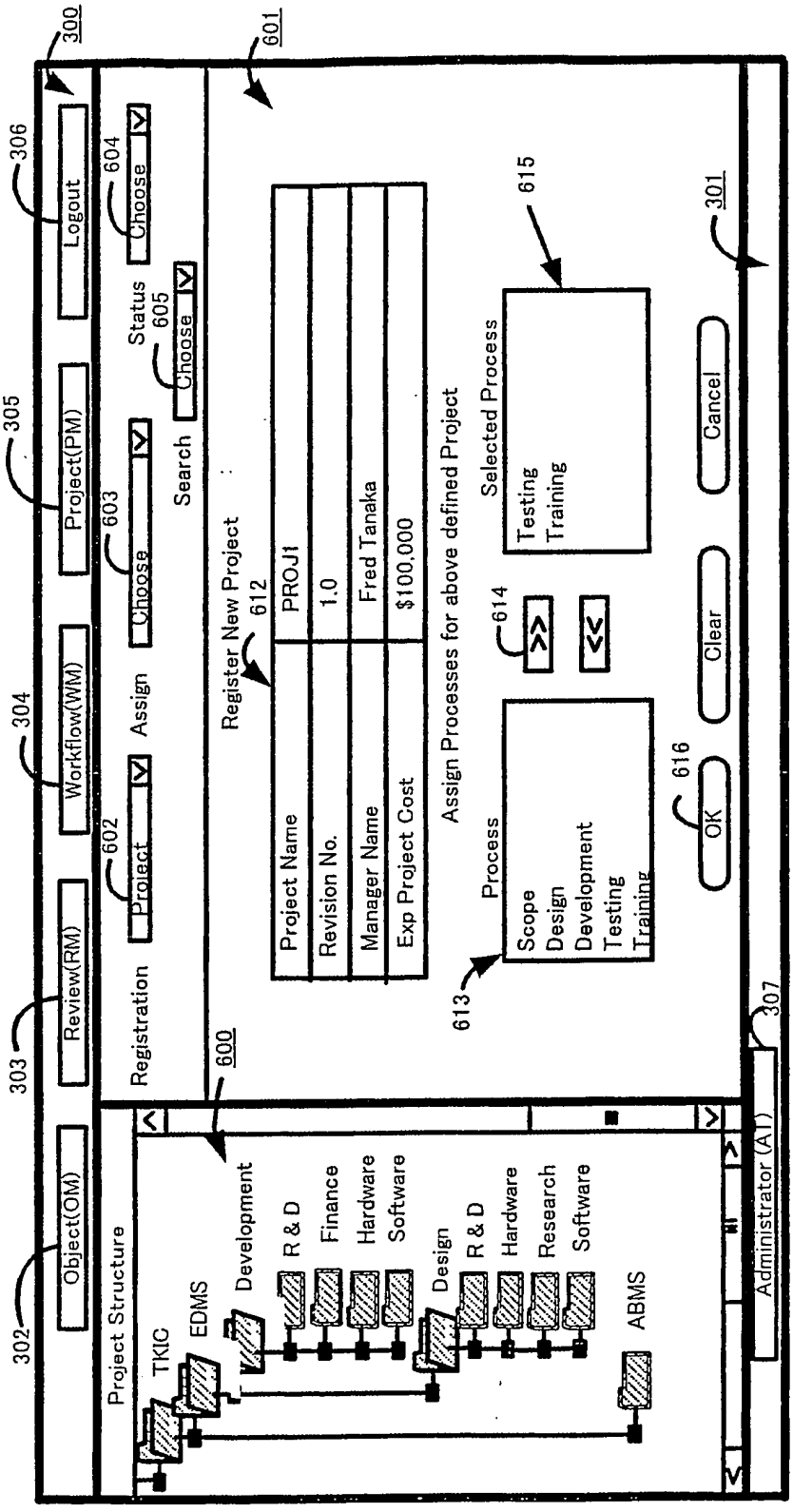
300
301
302
303
304
305
306
307
600
601
602
603
604
605
612
613
614
615
616
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Administrator (AT)
Registration
Project
Assign
Choose
Search
Status
Choose
Choose
Register New Project
Project Name
PROJ1
Revision No.
1.0
Manager Name
Fred Tanaka
Exp Project Cost
$100,000
Assign Processes for above defined Project
Process
Scope
Design
Development
Testing
Training
Selected Process
Testing
Training
Clear
Cancel
OK

FIG. 27

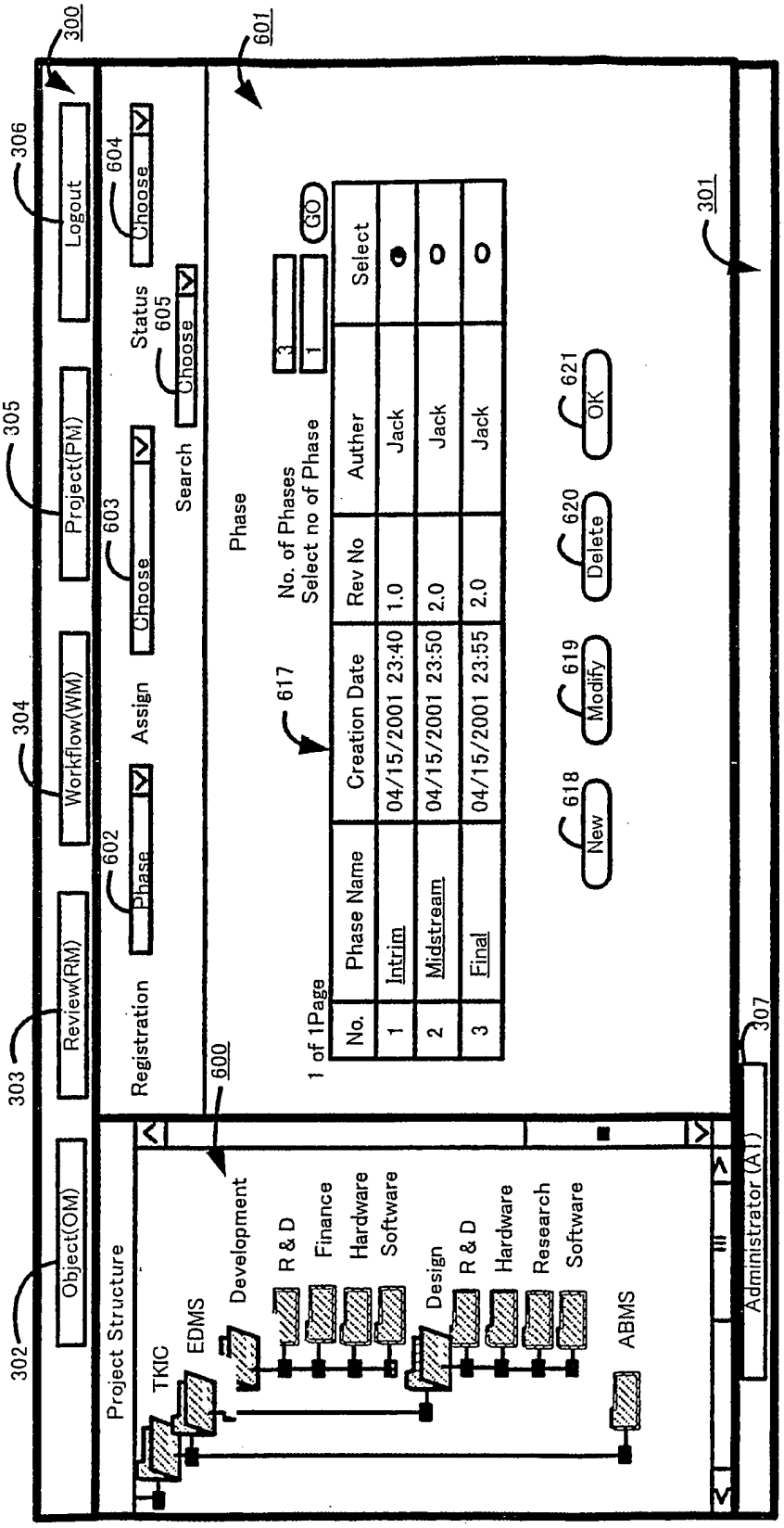
300
301
302
303
304
305
306
307
600
601
602
603
604
605
617
618
619
620
621
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Administrator (A1)
Registration
Phase
Assign
Choose
Search
Status
Choose
Choose
Phase
No. of Phases
Select no of Phase
3
1
GO
1 of 1Page
No.
Phase Name
Creation Date
Rev No
Auther
Select
1
Intrim
04/15/2001 23:40
1.0
Jack
2
Midstream
04/15/2001 23:50
2.0
Jack
3
Final
04/15/2001 23:55
2.0
Jack
New
Modify
Delete
OK

FIG. 28

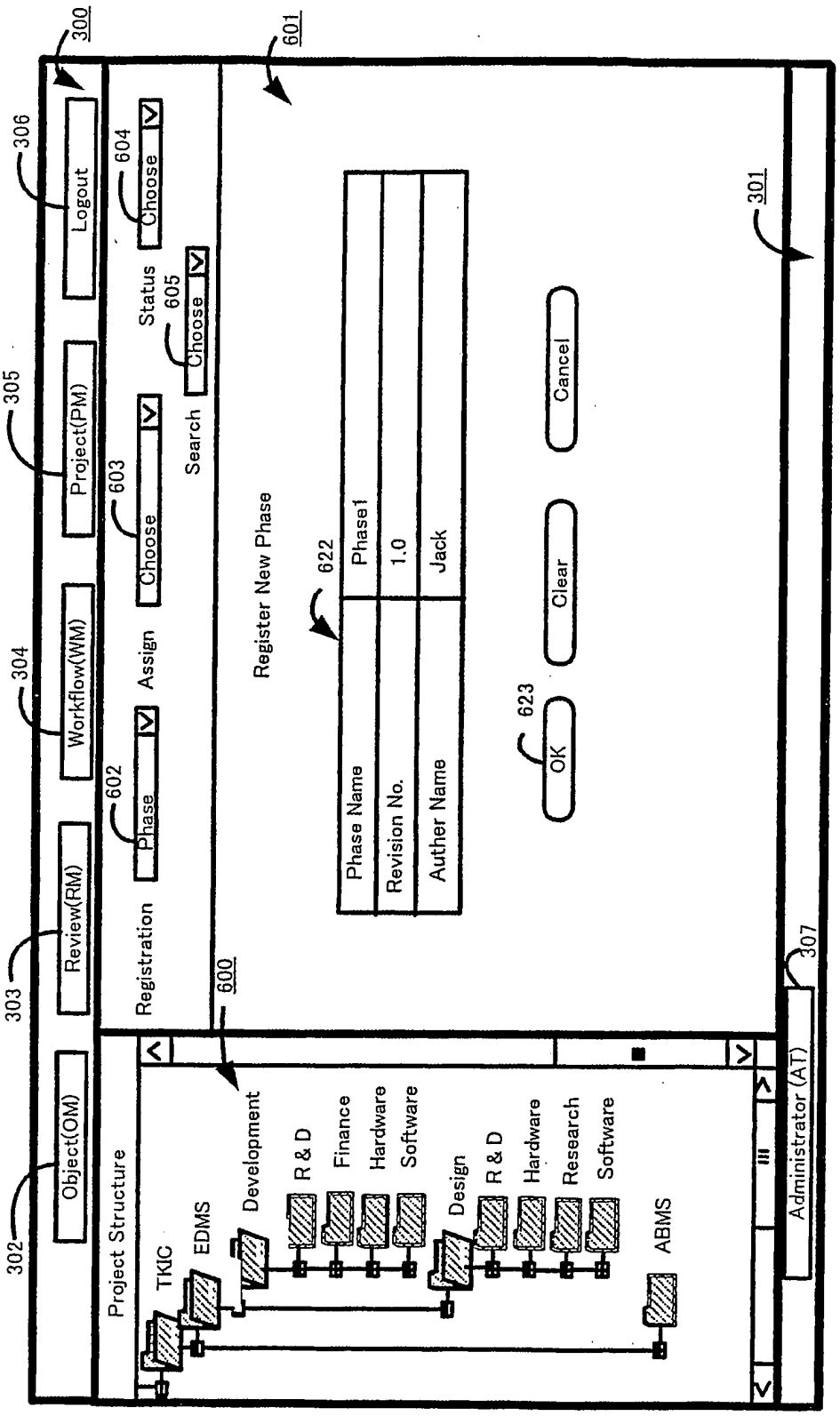
300
301
302
303
304
305
306
307
600
601
602
603
604
605
622
623
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Registration
Phase
Assign
Choose
Search
Choose
Status
Choose
Register New Phase
Phase Name
Revision No.
Auther Name
Phase1
1.0
Jack
OK
Clear
Cancel
Administrator (AT)

FIG. 29

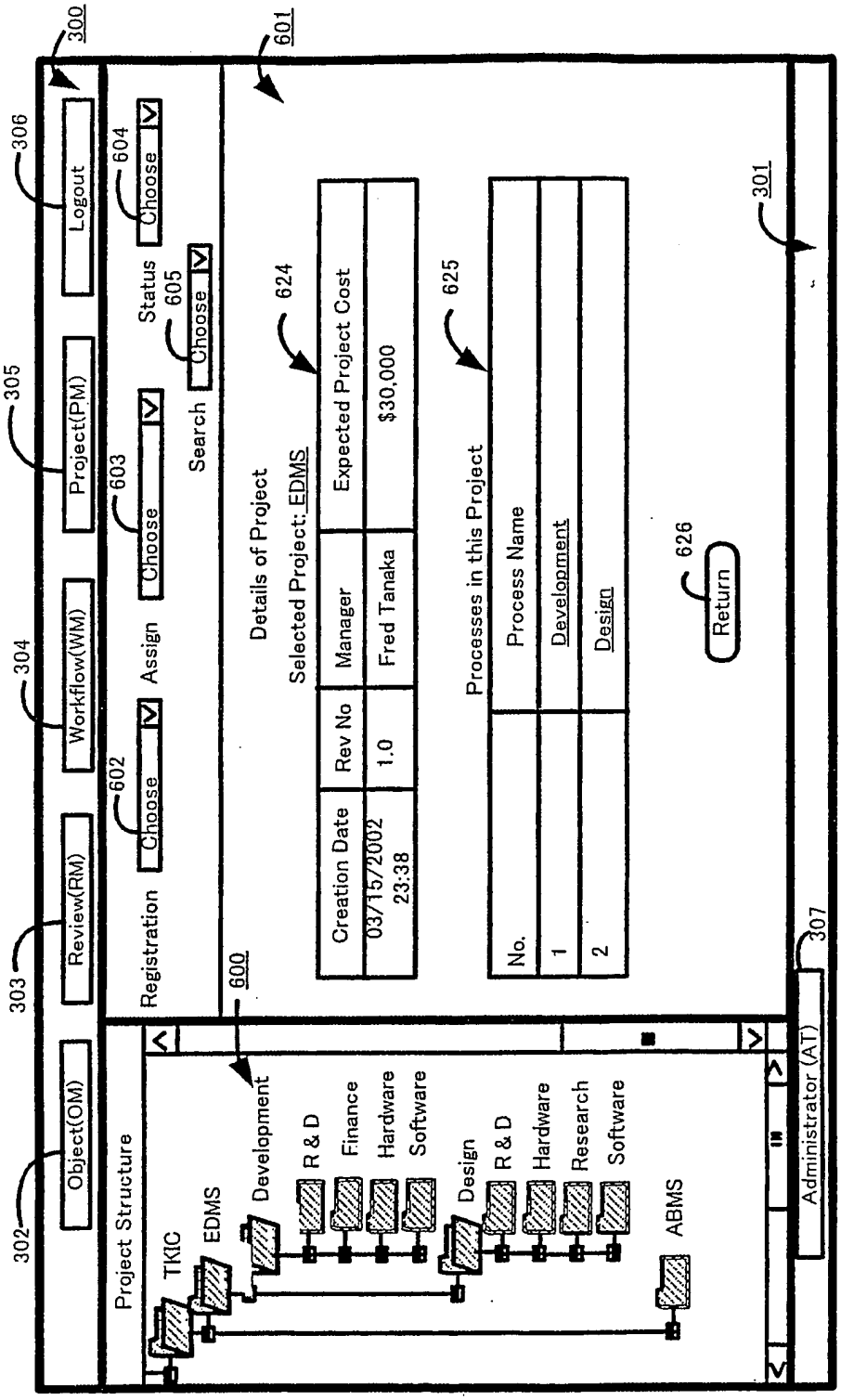
300
306
Logout
305
Project(PM)
304
Workflow(WM)
303
Review(RM)
302
Object(OM)
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
600
601
Registration
602
Choose
Assign
603
Choose
Search
604
Choose
Status
605
Choose
Details of Project
Selected Project: EDMS
624
Creation Date
Rev No
Manager
Expected Project Cost
03/15/2002 23:38
1.0
Fred Tanaka
$30,000
Processes in this Project
625
No.
Process Name
1
Development
2
Design
626
Return
301
307
Administrator (AT)

FIG. 30

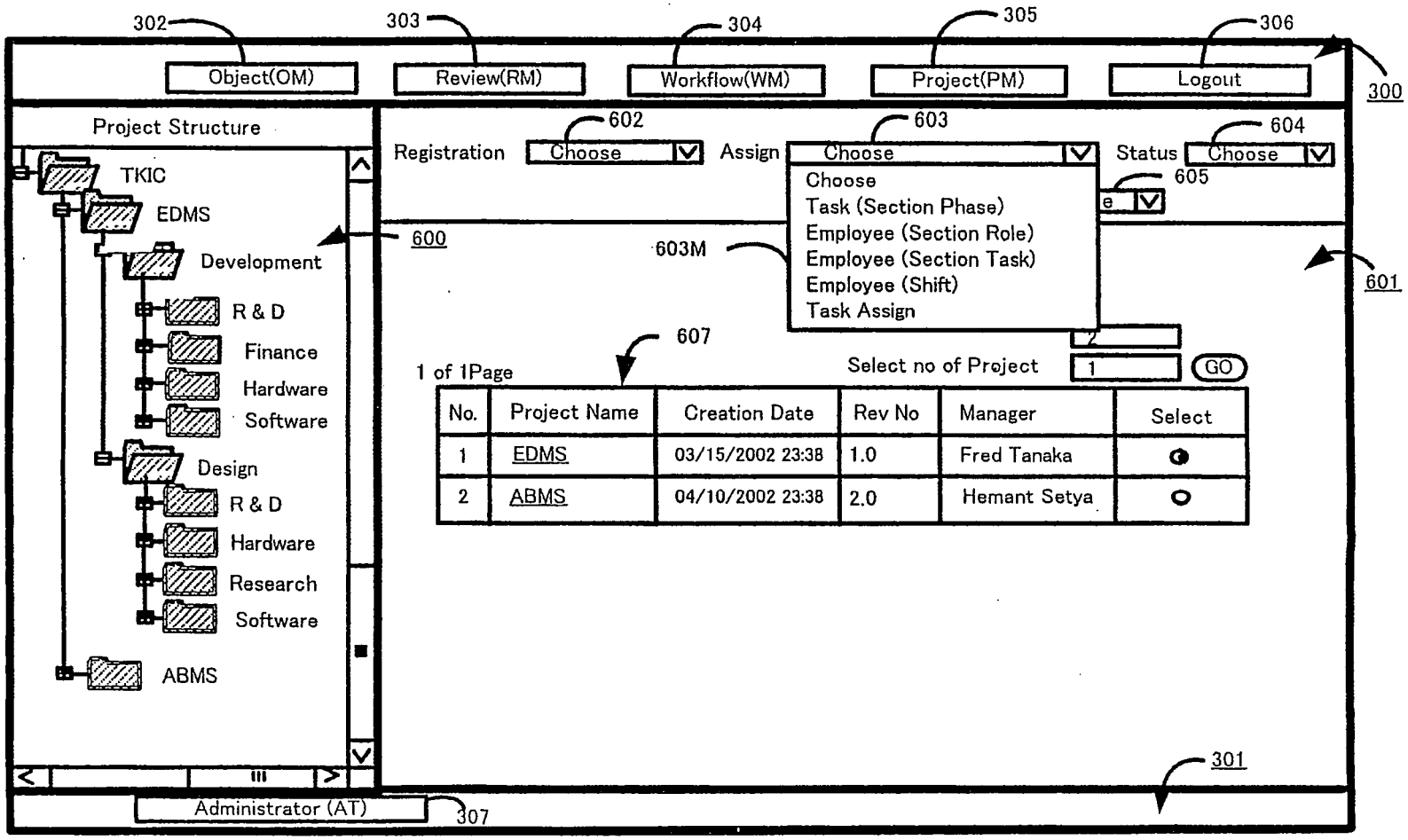

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FIG. 31

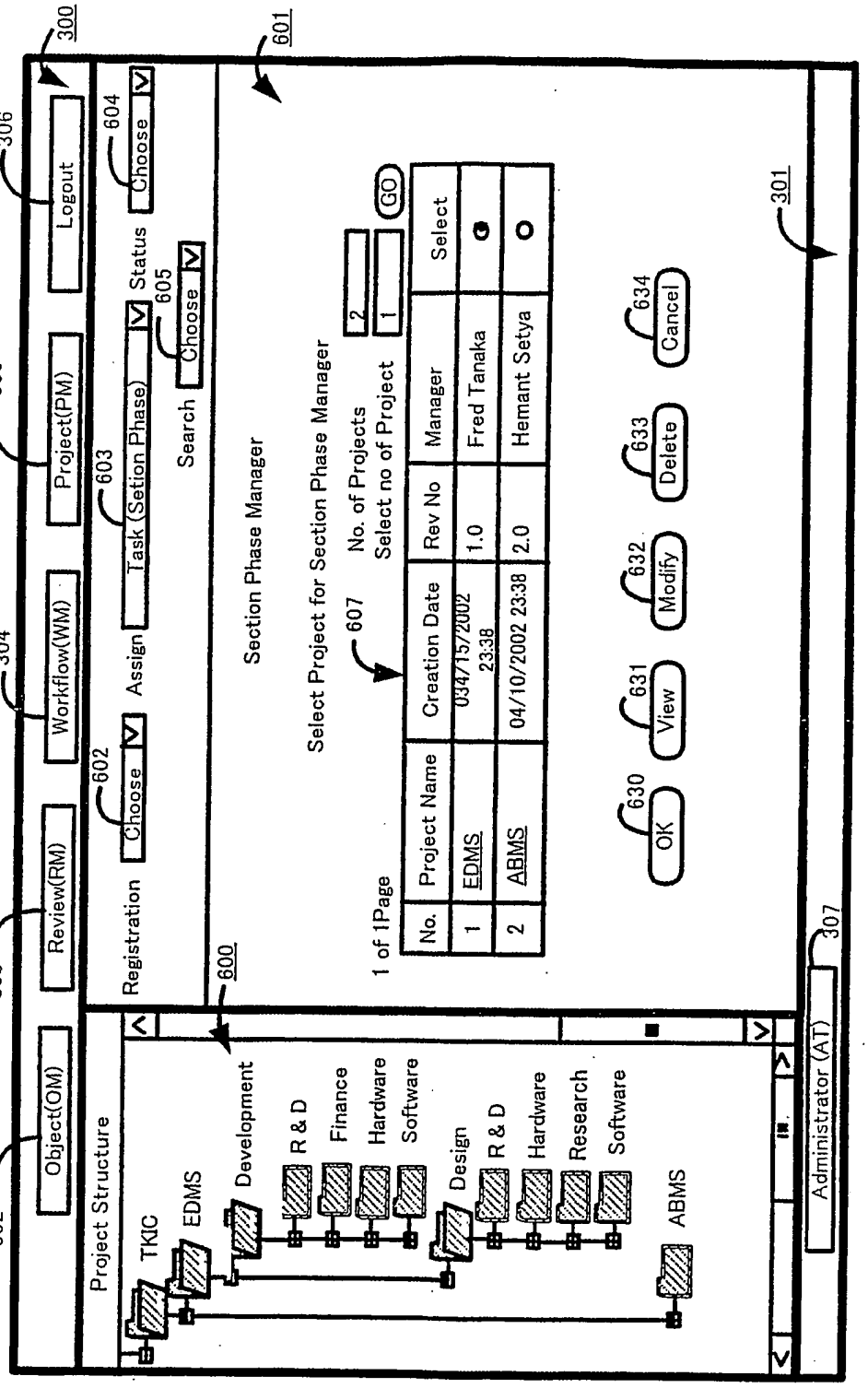
300
301
302
303
304
305
306
307
600
601
602
603
604
605
607
630
631
632
633
634
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Administrator (AT)
Registration
Choose
Assign
Task (Setion Phase)
Choose
Search
Status
Choose
Section Phase Manager
Select Project for Section Phase Manager
No. of Projects
Select no of Project
2
1
GO
1 of 1Page
No.
Project Name
Creation Date
Rev No
Manager
Select
1
EDMS
034/15/2002 23:38
1.0
Fred Tanaka
2
ABMS
04/10/2002 23:38
2.0
Hemant Setya
OK
View
Modify
Delete
Cancel

FIG. 32

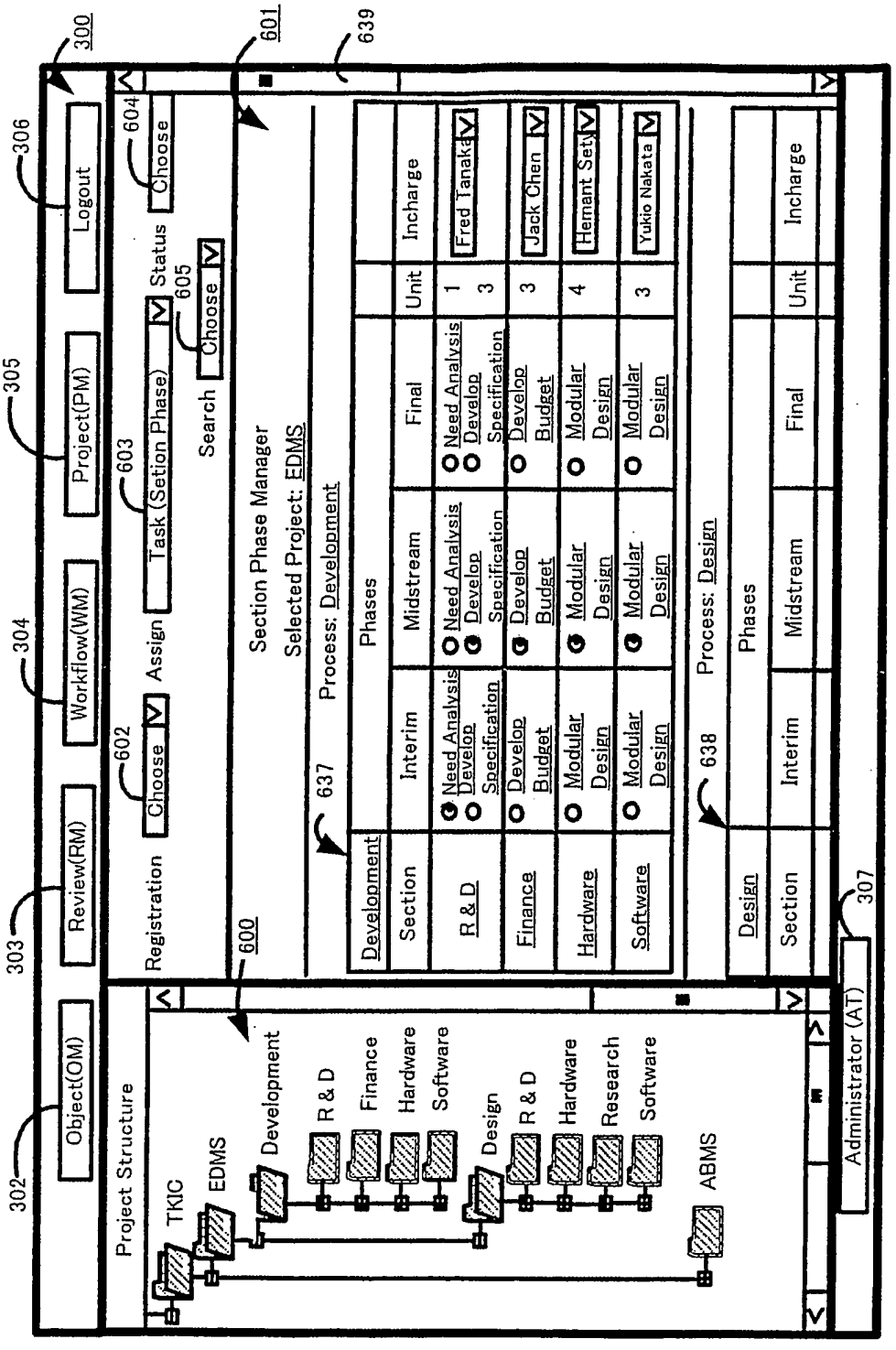
300
306
Logout
305
Project(PM)
304
Workflow(WM)
303
Review(RM)
302
Object(OM)
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Administrator (AT)
307
600
601
639
Registration
602
Choose
Assign
603
Task (Setion Phase)
Status
604
Choose
Search
605
Choose
Section Phase Manager
Selected Project: EDMS
637
Process: Development
Development
Phases
Section
Interim
Midstream
Final
Unit
Incharge
R & D
Need Analysis
Develop Specification
Need Analysis
Develop Specification
Need Analysis
Develop Specification
1
3
Fred Tanaka
Finance
Develop Budget
Develop Budget
Develop Budget
3
Jack Chen
Hardware
Modular Design
Modular Design
Modular Design
4
Hemant Set
Software
Modular Design
Modular Design
Modular Design
3
Yukio Nakata
638
Process: Design
Design
Phases
Section
Interim
Midstream
Final
Unit
Incharge

FIG. 33

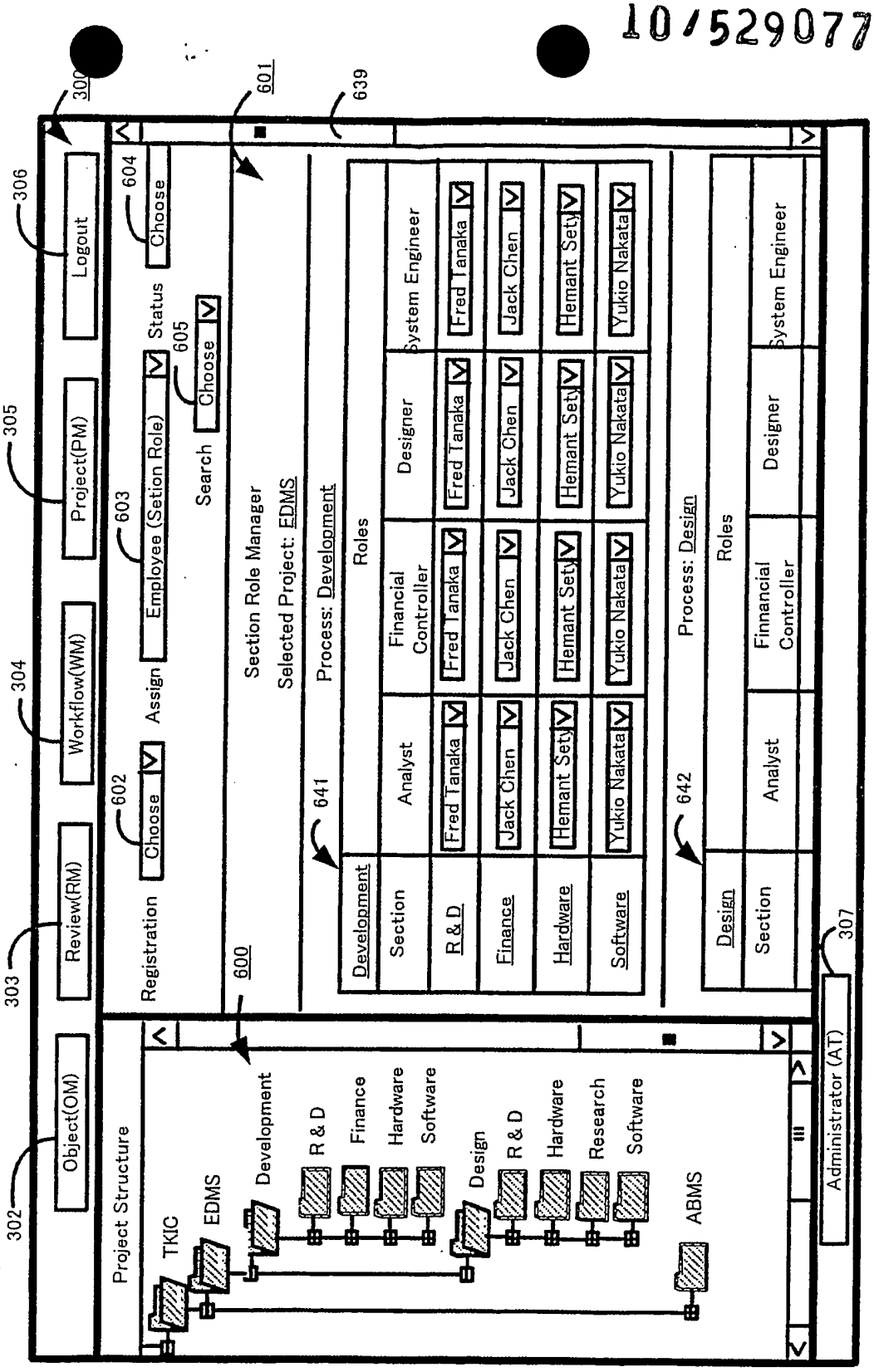
300
306
Logout
305
Project(PM)
304
Workflow(WM)
303
Review(RM)
302
Object(OM)
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Administrator (AT)
307
600
601
639
Registration
602
Choose
Assign
603
Employee (Setion Role)
Status
604
Choose
Search
605
Choose
Section Role Manager
Selected Project: EDMS
Process: Development
641
Roles
Development
Section
Analyst
Financial Controller
Designer
System Engineer
R & D
Fred Tanaka
Fred Tanaka
Fred Tanaka
Fred Tanaka
Finance
Jack Chen
Jack Chen
Jack Chen
Jack Chen
Hardware
Hemant Sety
Hemant Sety
Hemant Sety
Hemant Sety
Software
Yukio Nakata
Yukio Nakata
Yukio Nakata
Yukio Nakata
642
Process: Design
Roles
Design
Section
Analyst
Finnancial Controller
Designer
System Engineer

FIG. 34

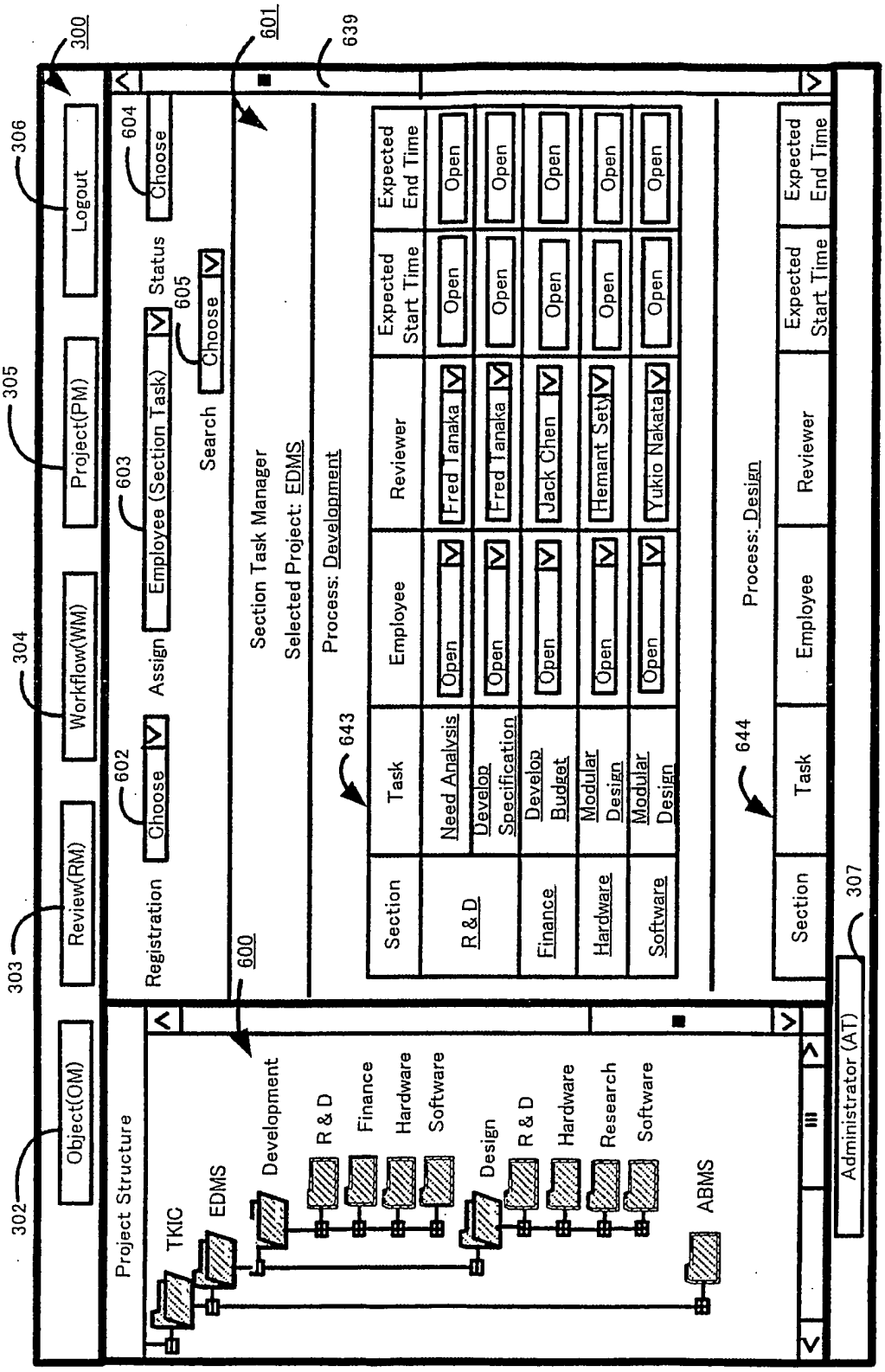
300
306
Logout
305
Project(PM)
304
Workflow(WM)
303
Review(RM)
302
Object(OM)
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Administrator (AT)
307
600
601
639
Registration
602
Choose
Assign
603
Employee (Section Task)
Search
605
Choose
Status
604
Choose
Section Task Manager
Selected Project: EDMS
Process: Development
643
Section
Task
Employee
Reviewer
Expected Start Time
Expected End Time
R & D
Need Analysis
Open
Fred Tanaka
Open
Open
Develop Specification
Open
Fred Tanaka
Open
Open
Finance
Develop Budget
Open
Jack Chen
Open
Open
Hardware
Modular Design
Open
Hemant Seth
Open
Open
Software
Modular Design
Open
Yukio Nakata
Open
Open
644
Process: Design
Section
Task
Employee
Reviewer
Expected Start Time
Expected End Time

FIG. 35

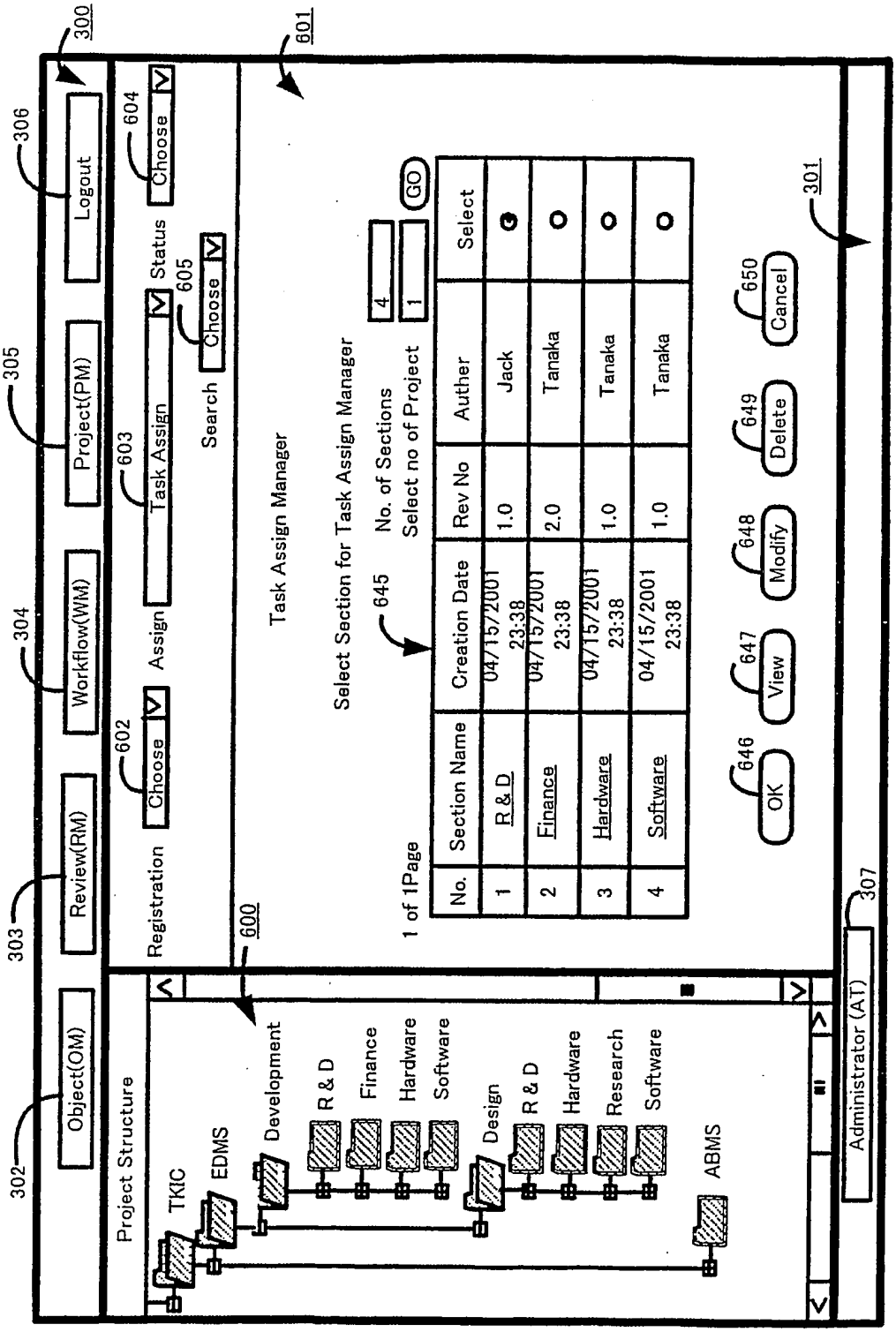
300
306
305
304
303
302
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Registration
602
Choose
Assign
603
Task Assign
Status
604
Choose
Search
605
Choose
600
601
Task Assign Manager
Select Section for Task Assign Manager
645
No. of Sections
4
Select no of Project
1
GO
1 of 1Page
No.
Section Name
Creation Date
Rev No
Auther
Select
1
R & D
04/15/2001 23:38
1.0
Jack
2
Finance
04/15/2001 23:38
2.0
Tanaka
3
Hardware
04/15/2001 23:38
1.0
Tanaka
4
Software
04/15/2001 23:38
1.0
Tanaka
646
OK
647
View
648
Modify
649
Delete
650
Cancel
301
307
Administrator (AT)

FIG. 36

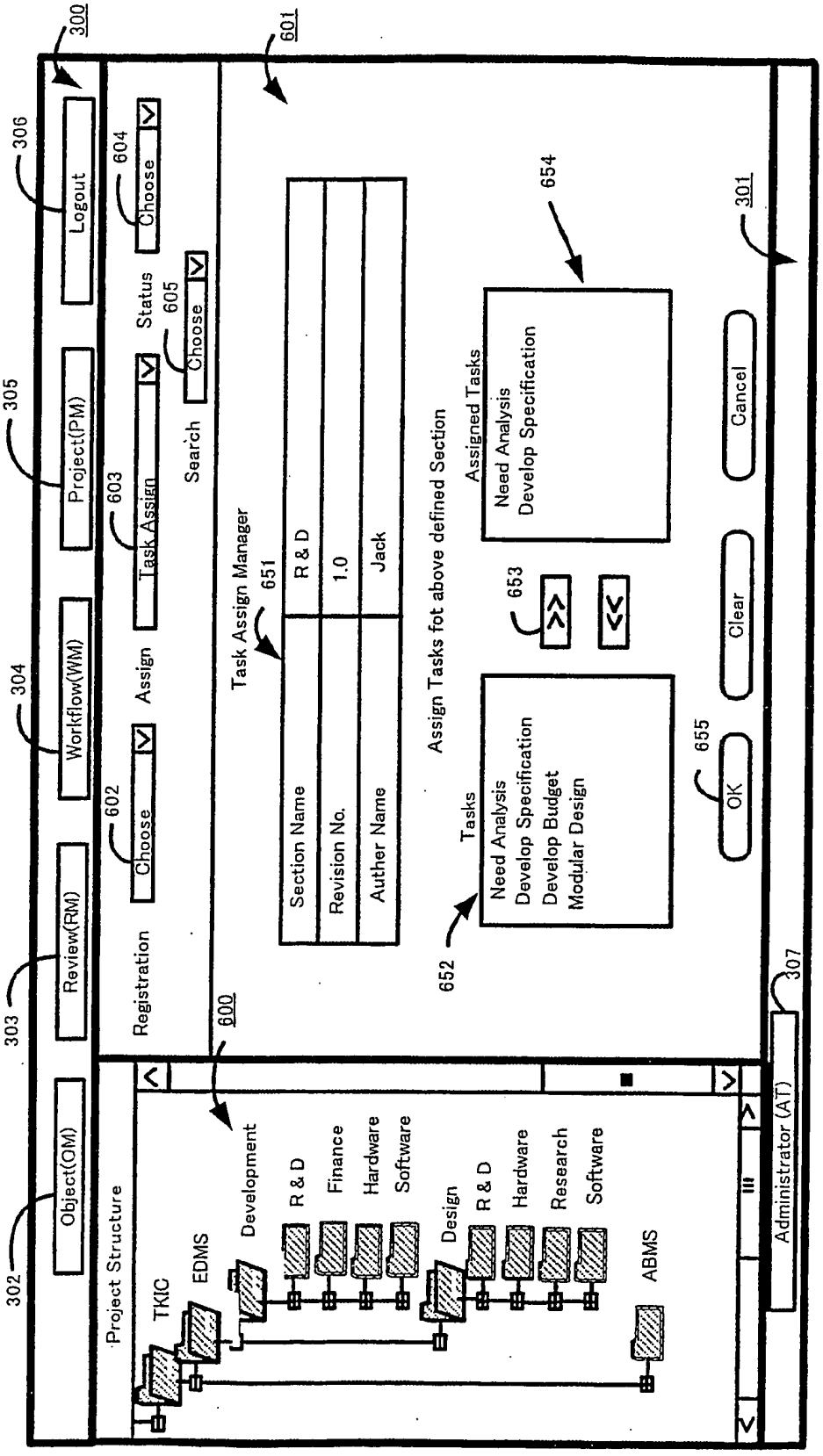
300
301
302
303
304
305
306
307
600
601
602
603
604
605
651
652
653
654
655
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Administrator (AT)
Registration
Choose
Assign
Task Assign
Search
Status
Choose
Choose
Task Assign Manager
Section Name
Revision No.
Auther Name
R & D
1.0
Jack
Assign Tasks fot above defined Section
Tasks
Need Analysis
Develop Specification
Develop Budget
Modular Design
Assigned Tasks
Need Analysis
Develop Specification
Clear
Cancel
OK

FIG. 37

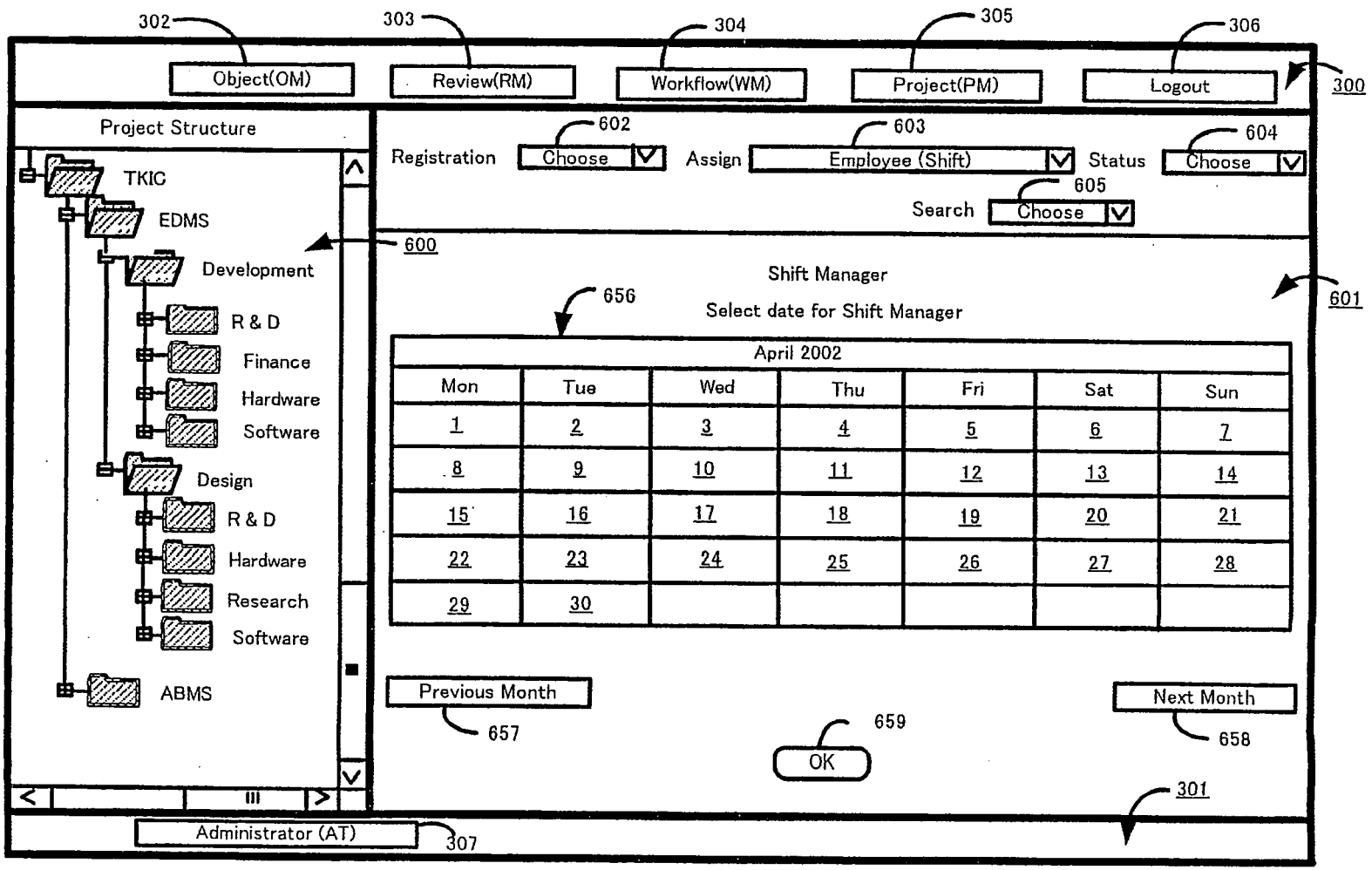

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FIG. 38

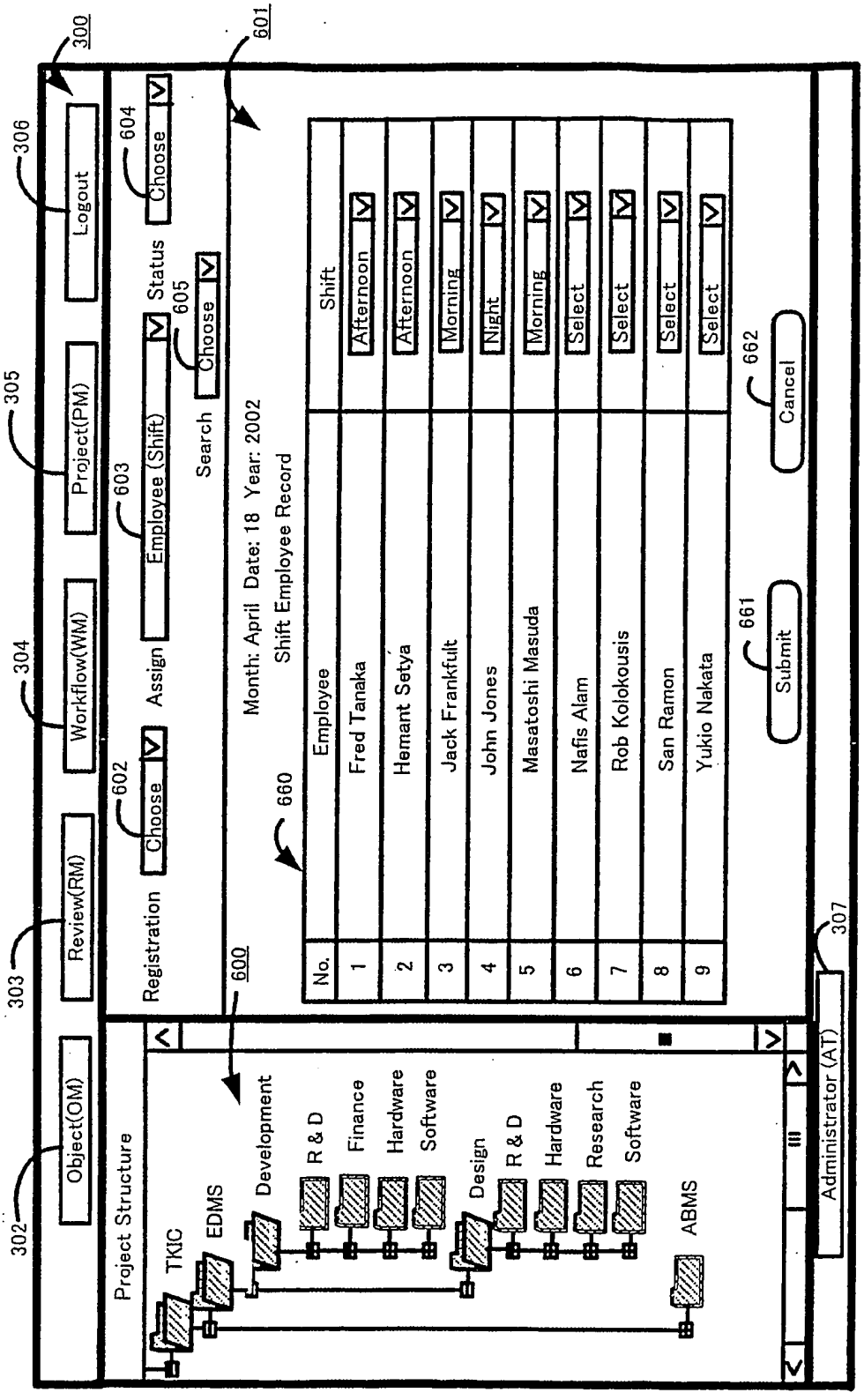
300
306
Logout
305
Project(PM)
304
Workflow(WM)
303
Review(RM)
302
Object(OM)
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Administrator (AT)
307
600
601
Registration
602
Choose
Assign
603
Employee (Shift)
Search
605
Choose
Status
604
Choose
Month: April Date: 18 Year: 2002
Shift Employee Record
660
No.
Employee
Shift
1
Fred Tanaka
Afternoon
2
Hemant Setya
Afternoon
3
Jack Frankfult
Morning
4
John Jones
Night
5
Masatoshi Masuda
Morning
6
Nafis Alam
Select
7
Rob Kolokousis
Select
8
San Ramon
Select
9
Yukio Nakata
Select
661
Submit
662
Cancel

FIG. 39

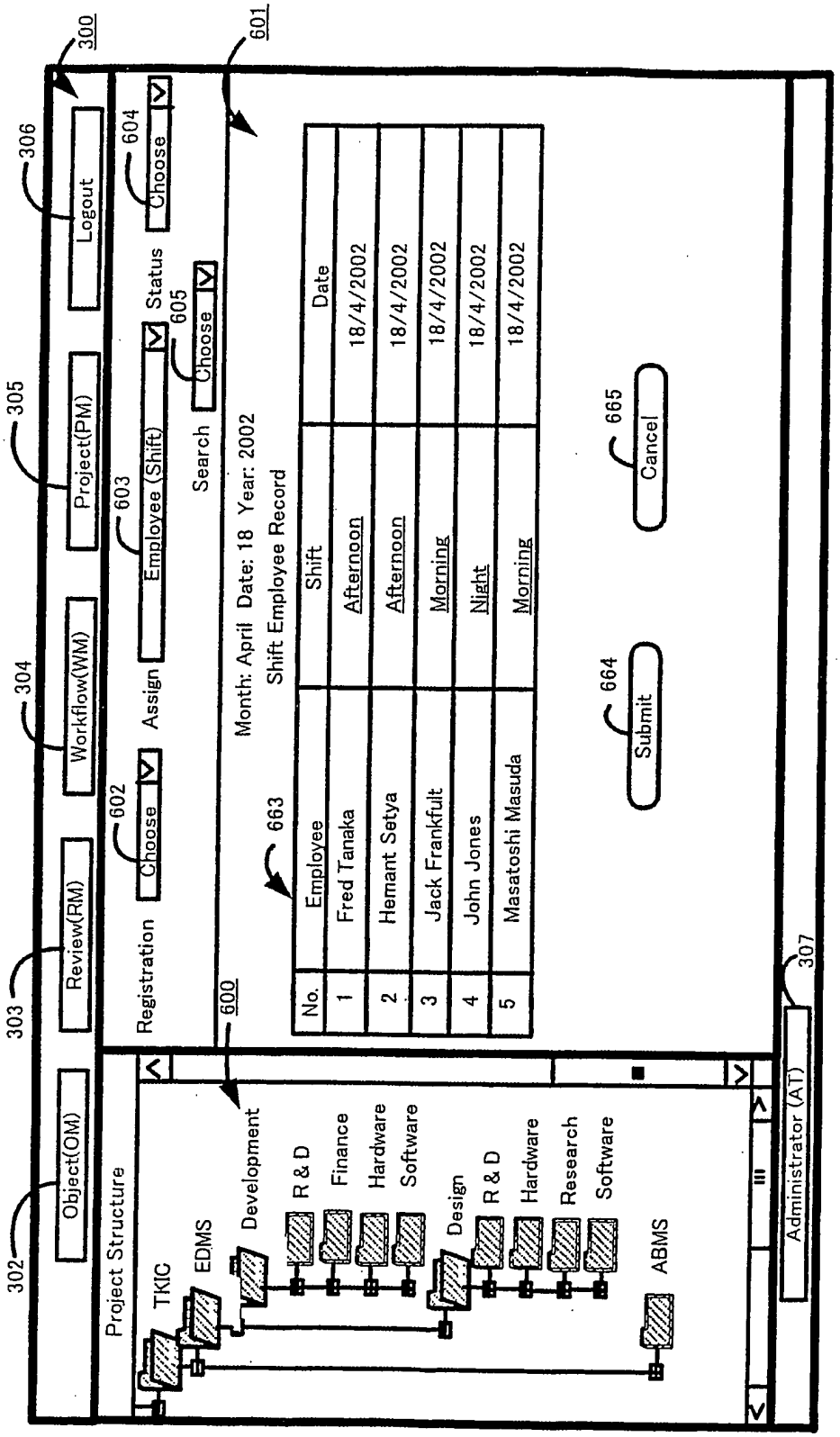
300
301
302
303
304
305
306
307
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Administrator (AT)
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Registration
Choose
602
Assign
Employee (Shift)
603
Search
Choose
605
Status
Choose
604
600
601
Month: April Date: 18 Year: 2002
Shift Employee Record
663
No.
Employee
Shift
Date
1
Fred Tanaka
Afternoon
18/4/2002
2
Hemant Setya
Afternoon
18/4/2002
3
Jack Frankfult
Morning
18/4/2002
4
John Jones
Night
18/4/2002
5
Masatoshi Masuda
Morning
18/4/2002
664
Submit
665
Cancel

FIG. 40

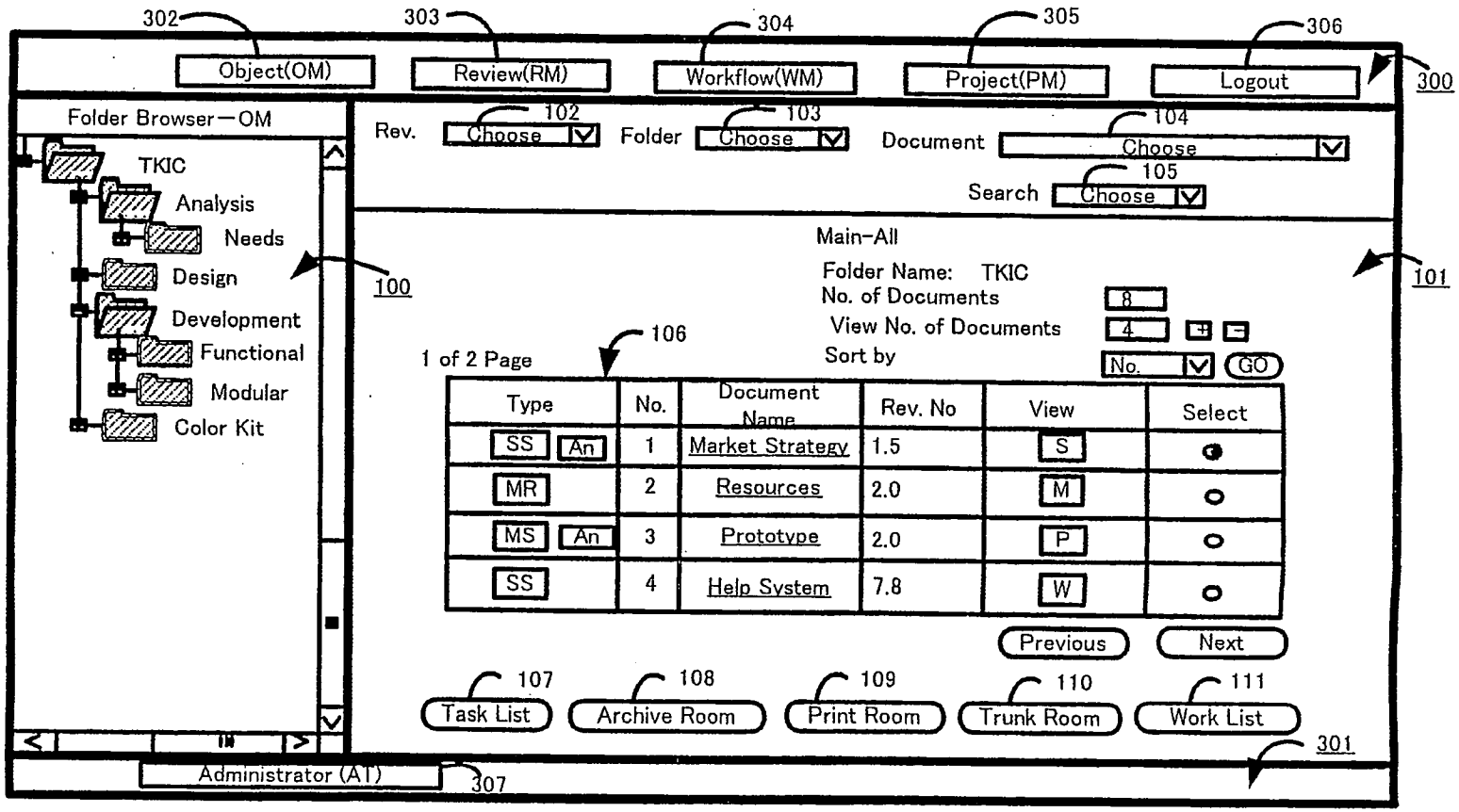

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FIG. 41

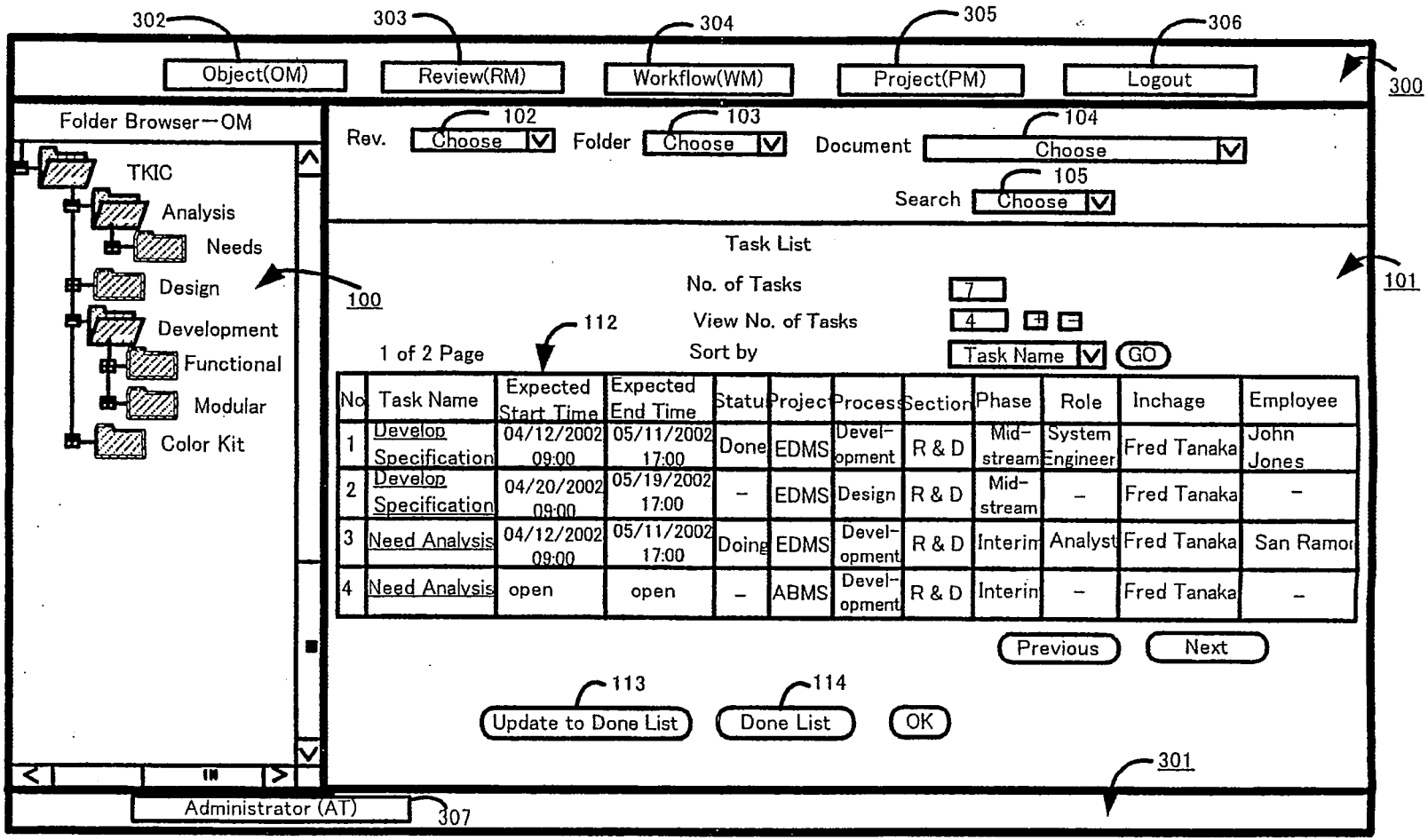

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FIG. 42

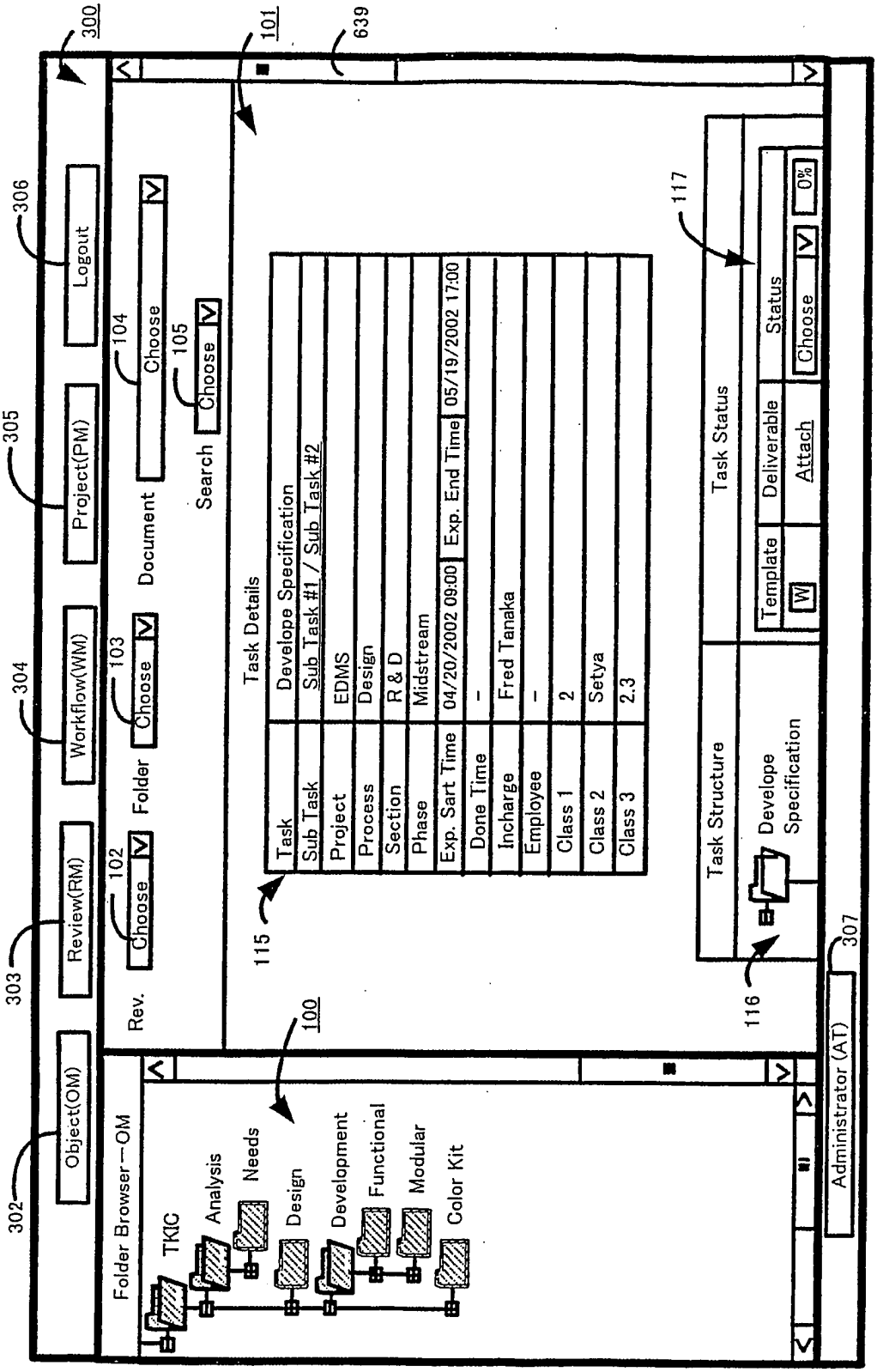
300
101
639
306
Logout
305
Project(PM)
104
Choose
105
Choose
Search
Document
304
Workflow(WM)
103
Choose
Folder
303
Review(RM)
102
Choose
Rev.
302
Object(OM)
Task Details
Task
Sub Task
Project
Process
Section
Phase
Exp. Sart Time
Done Time
Incharge
Employee
Class 1
Class 2
Class 3
Develope Specification
Sub Task #1 / Sub Task #2
EDMS
Design
R & D
Midstream
04/20/2002 09:00
Exp. End Time
05/19/2002 17:00
-
Fred Tanaka
-
2
Setya
2.3
115
100
Folder Browser—OM
TKIC
Analysis
Needs
Design
Development
Functional
Modular
Color Kit
117
Task Status
Template
Deliverable
Status
W
Attach
Choose
0%
Task Structure
Develope Specification
116
307
Administrator (AT)

FIG. 43

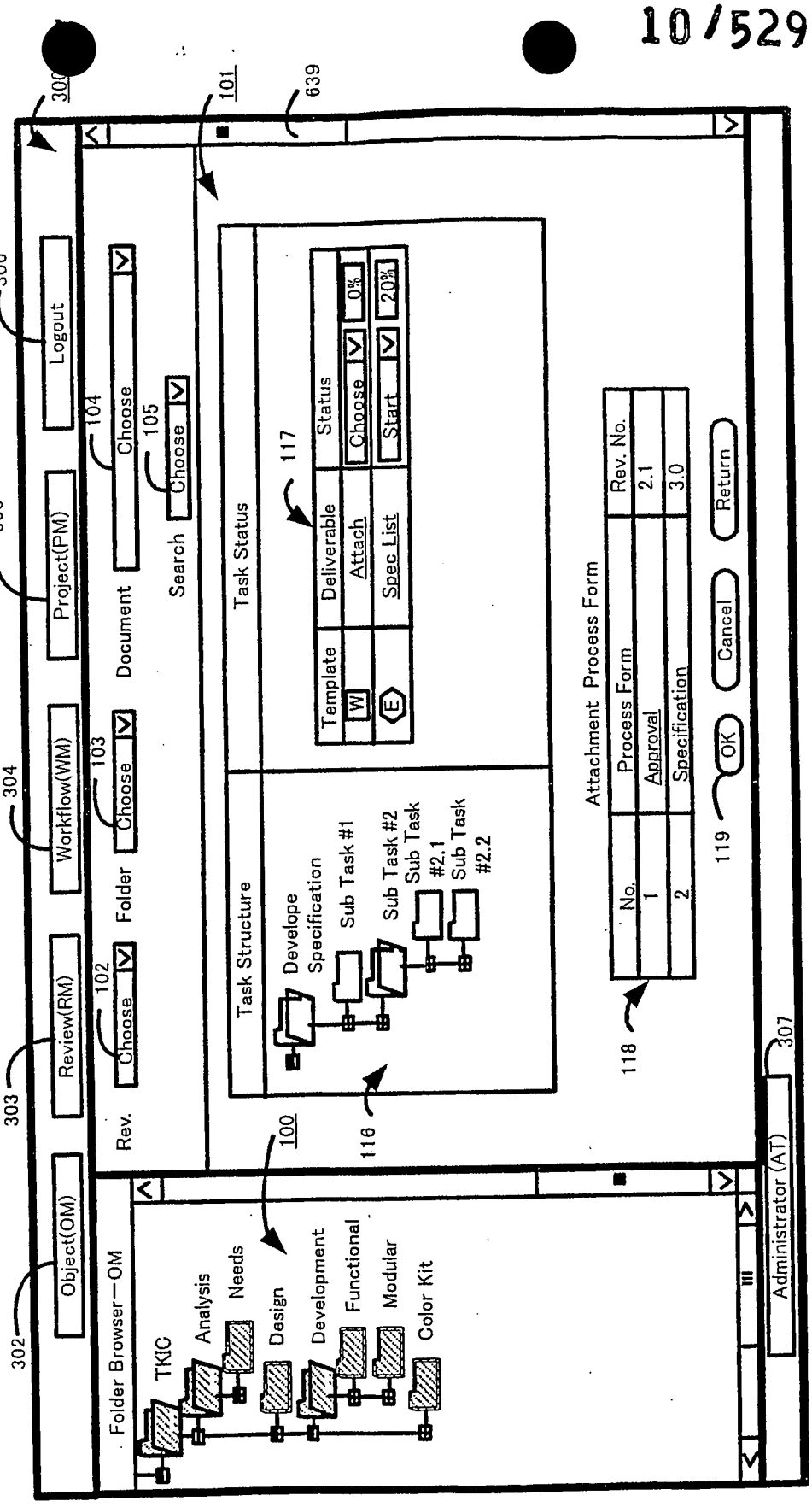
300
306
Logout
305
Project(PM)
304
Workflow(WM)
303
Review(RM)
302
Object(OM)
101
639
104
Choose
105
Choose
Search
Document
103
Choose
Folder
102
Choose
Rev.
Task Status
117
Template
Deliverable
Status
W
Attach
Choose
0%
E
Spec List
Start
20%
Task Structure
Develope Specification
Sub Task #1
Sub Task #2
Sub Task #2.1
Sub Task #2.2
116
100
Folder Browser—OM
TKIC
Analysis
Needs
Design
Development
Functional
Modular
Color Kit
Attachment Process Form
No.
Process Form
Rev. No.
1
Approval
2.1
2
Specification
3.0
118
119
OK
Cancel
Return
Administrator (AT)
307

FIG. 44

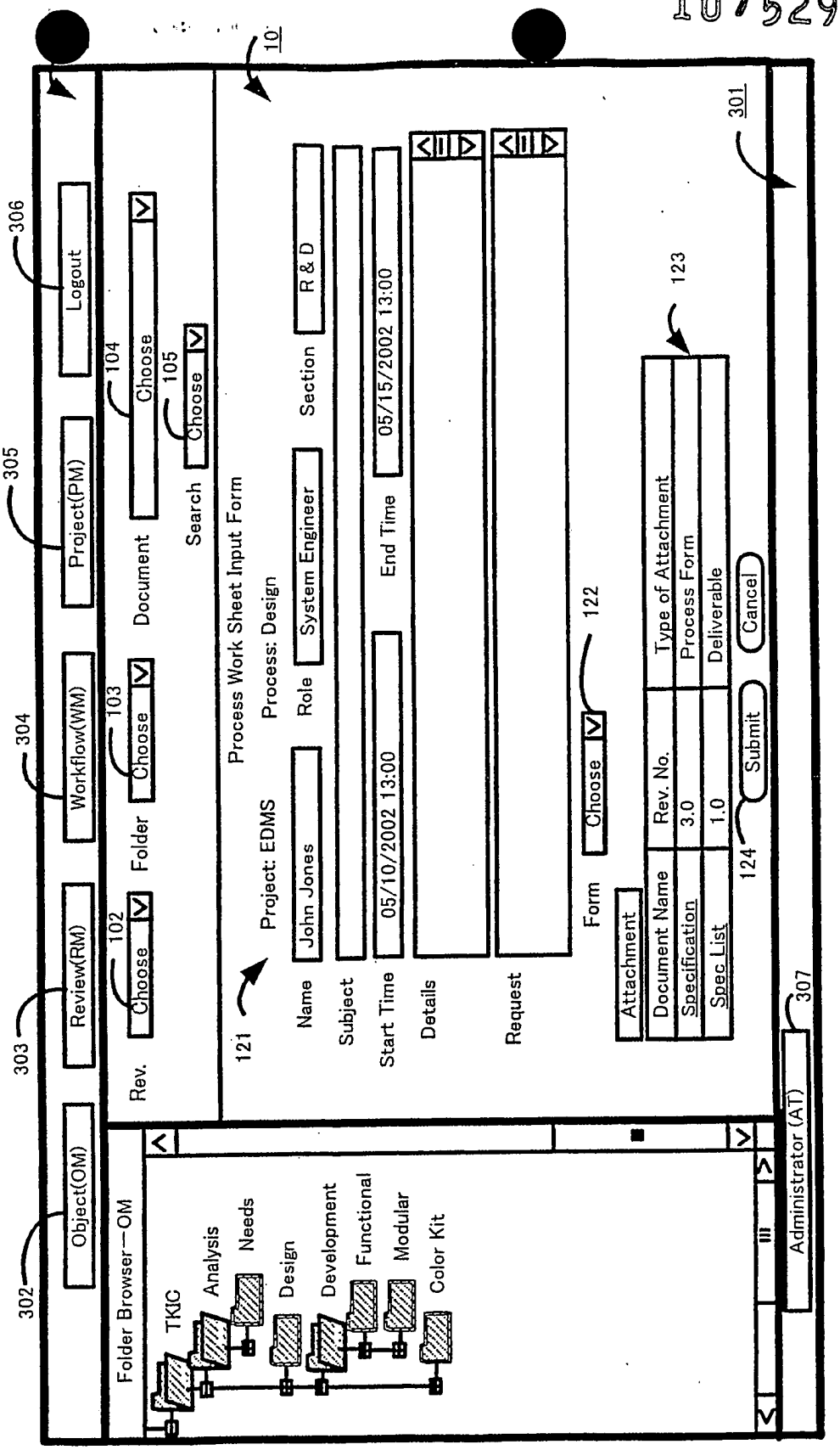
10
301
302
303
304
305
306
307
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Folder Browser—OM
TKIC
Analysis
Needs
Design
Development
Functional
Modular
Color Kit
Rev.
Choose
Folder
Choose
Document
Choose
Search
Choose
Process Work Sheet Input Form
Project: EDMS
Process: Design
121
Name
John Jones
Role
System Engineer
Section
R & D
Subject
Start Time
05/10/2002 13:00
End Time
05/15/2002 13:00
Details
Request
Form
Choose
122
Attachment
Document Name
Rev. No.
Type of Attachment
Specification
3.0
Process Form
Spec List
1.0
Deliverable
123
124
Submit
Cancel
Administrator (AT)

FIG.45

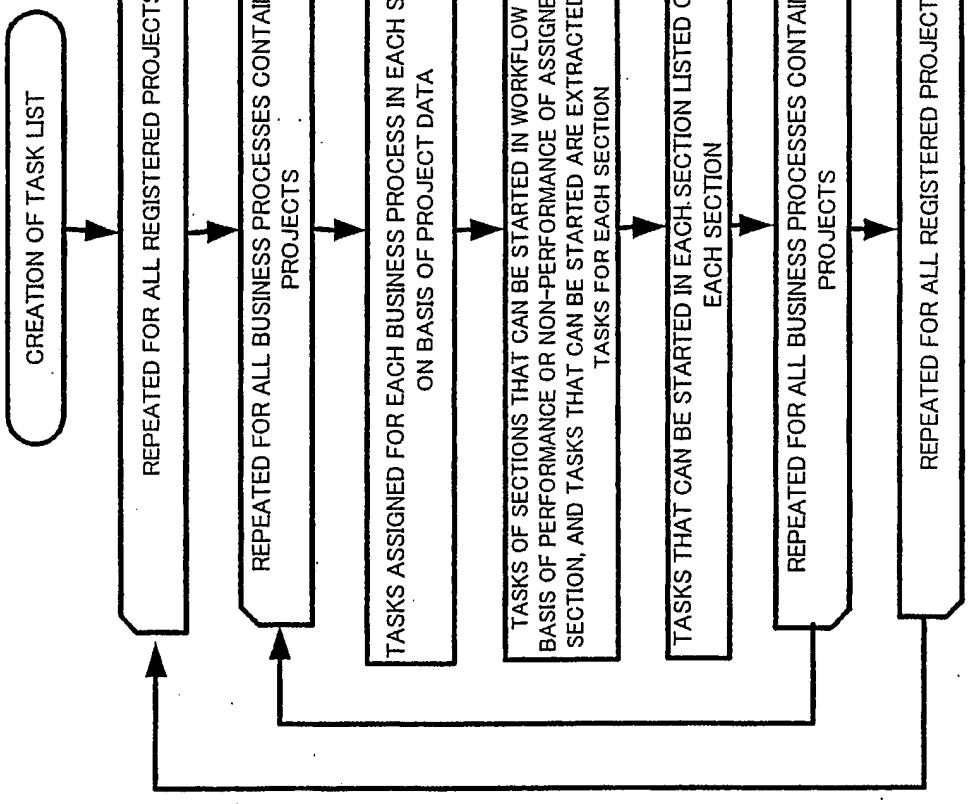
CREATION OF TASK LIST
S1
REPEATED FOR ALL REGISTERED PROJECTS
S2
REPEATED FOR ALL BUSINESS PROCESSES CONTAINED IN THE PROJECTS
S3
TASKS ASSIGNED FOR EACH BUSINESS PROCESS IN EACH SECTION GRASPED ON BASIS OF PROJECT DATA
S4
TASKS OF SECTIONS THAT CAN BE STARTED IN WORKFLOW ARE JUDGED ON BASIS OF PERFORMANCE OR NON-PERFORMANCE OF ASSIGNED TASKS BY EACH SECTION, AND TASKS THAT CAN BE STARTED ARE EXTRACTED FROM ASSIGNED TASKS FOR EACH SECTION
S5
TASKS THAT CAN BE STARTED IN EACH SECTION LISTED ON TASK LIST FOR EACH SECTION
S2
REPEATED FOR ALL BUSINESS PROCESSES CONTAINED IN THE PROJECTS
S1
REPEATED FOR ALL REGISTERED PROJECTS

FIG. 46

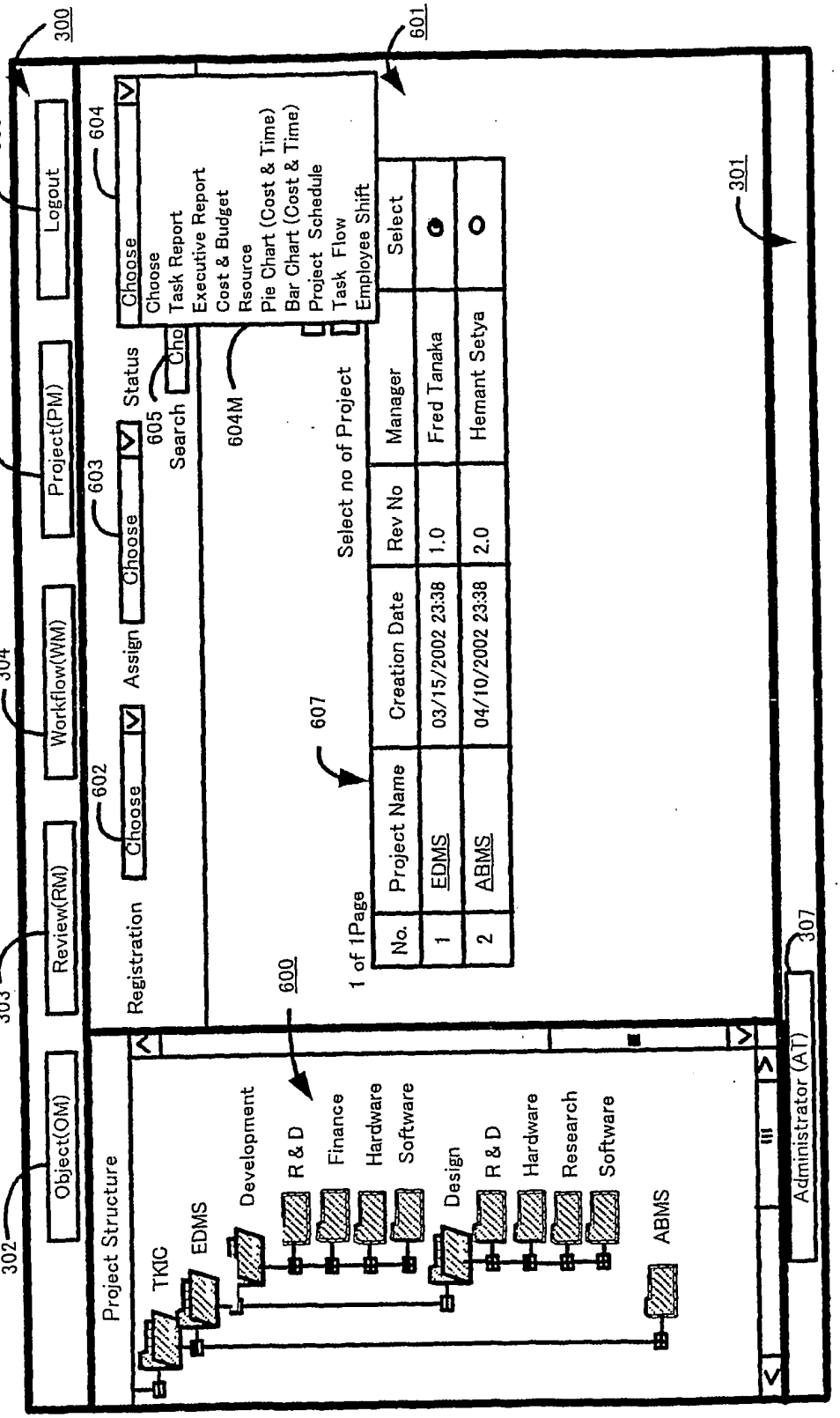
300
301
302
303
304
305
306
307
600
601
602
603
604
604M
605
607
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Administrator (AT)
Project Structure
TKIC
EDMS
Development
R & D
Finance
Hardware
Software
Design
R & D
Hardware
Research
Software
ABMS
Registration
Choose
Assign
Choose
Status
Choose
Search
Choose
Task Report
Executive Report
Cost & Budget
Rsource
Pie Chart (Cost & Time)
Bar Chart (Cost & Time)
Project Schedule
Task Flow
Employee Shift
Select no of Project
1 of 1Page
No.
Project Name
Creation Date
Rev No
Manager
Select
1
EDMS
03/15/2002 23:38
1.0
Fred Tanaka
2
ABMS
04/10/2002 23:38
2.0
Hemant Setya

FIG.47

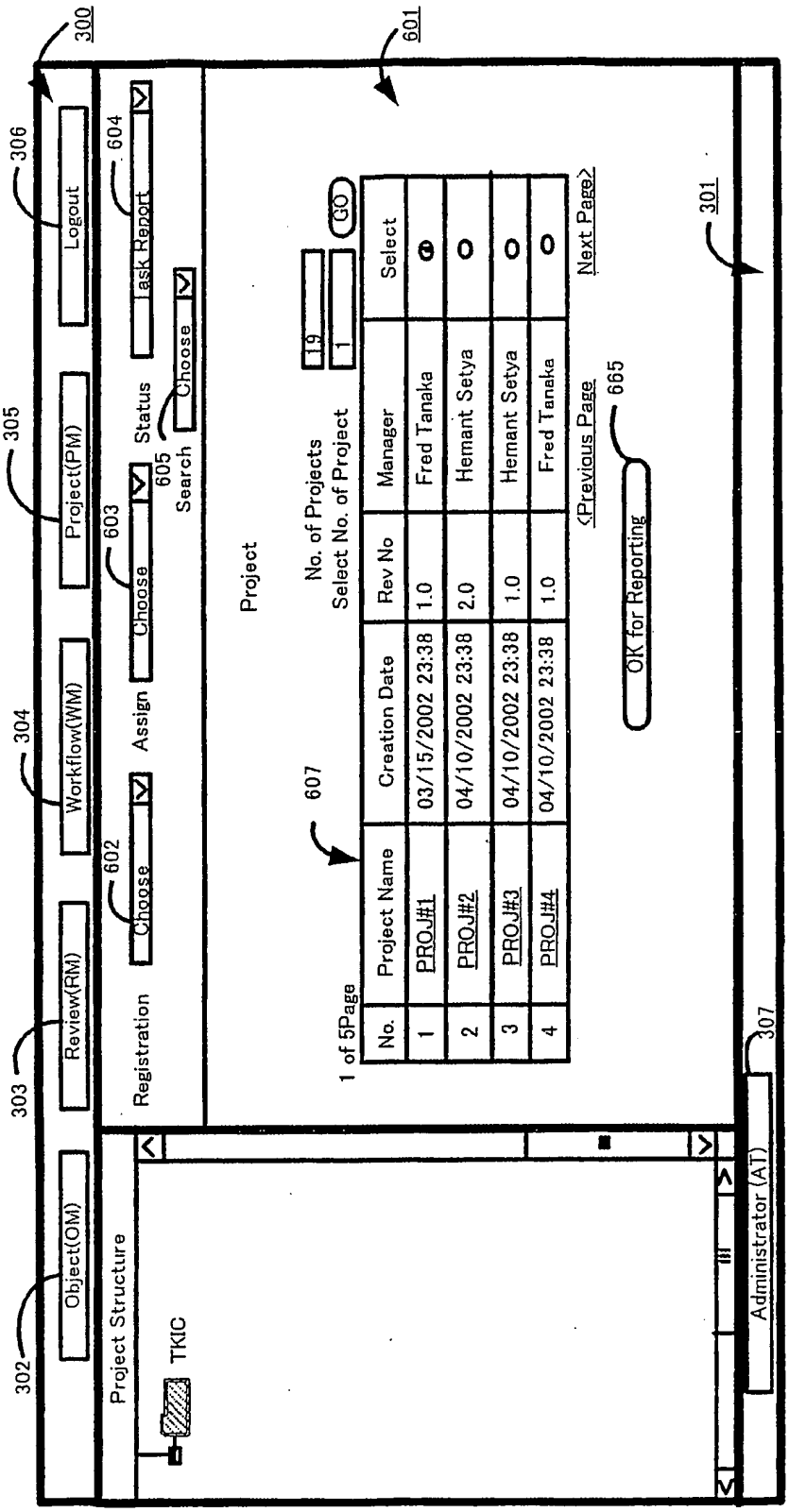
300
301
302
303
304
305
306
307
601
602
603
604
605
607
665
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Project Structure
TKIC
Registration
Choose
Assign
Choose
Search
Status
Choose
Task Report
Project
No. of Projects
Select No. of Project
19
1
GO
1 of 5Page
<Previous Page
Next Page>
OK for Reporting
Administrator (AT)
No.
Project Name
Creation Date
Rev No
Manager
Select
1
PROJ#1
03/15/2002 23:38
1.0
Fred Tanaka
2
PROJ#2
04/10/2002 23:38
2.0
Hemant Setya
3
PROJ#3
04/10/2002 23:38
1.0
Hemant Setya
4
PROJ#4
04/10/2002 23:38
1.0
Fred Tanaka

FIG. 48

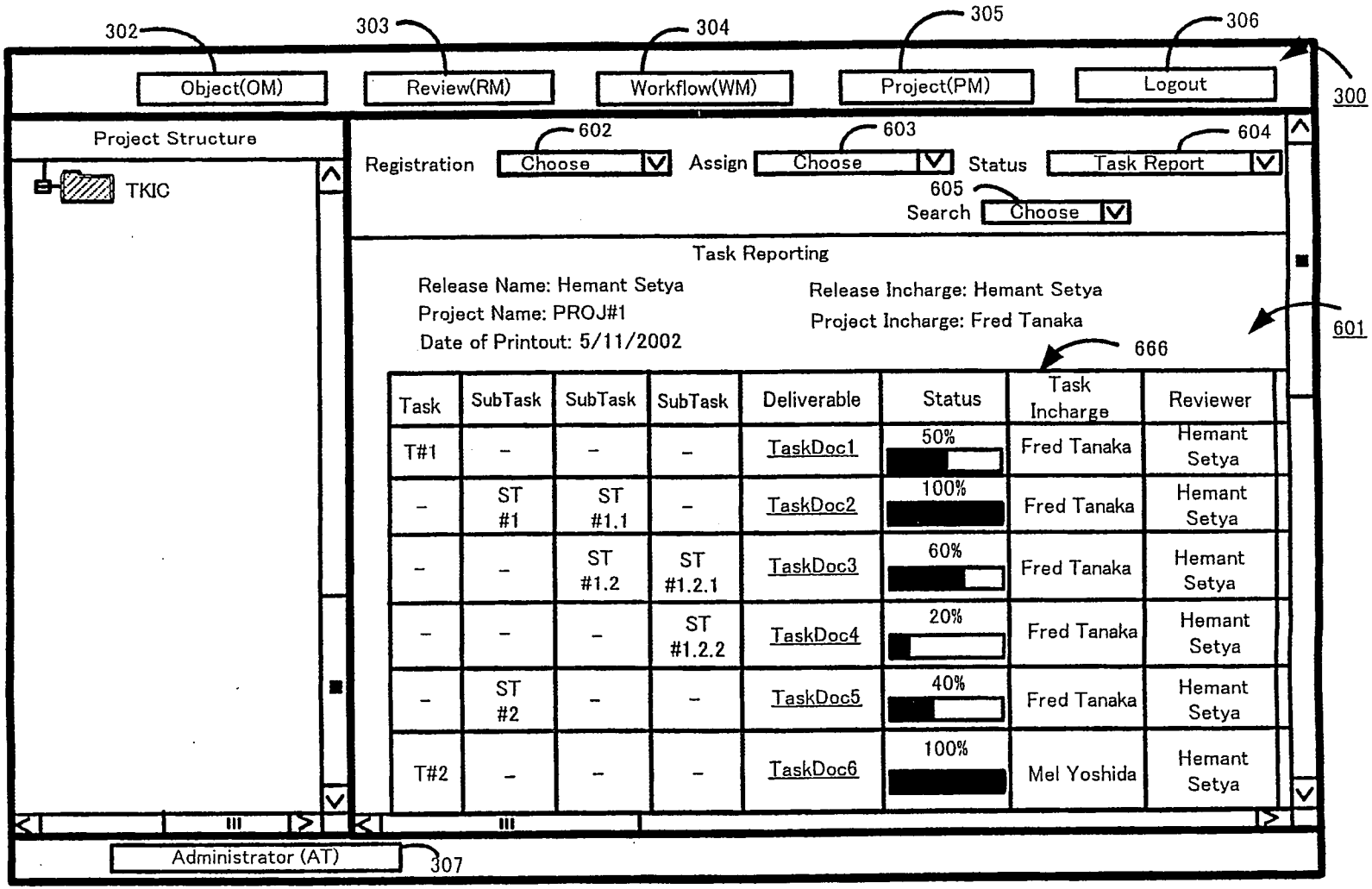

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FIG. 49

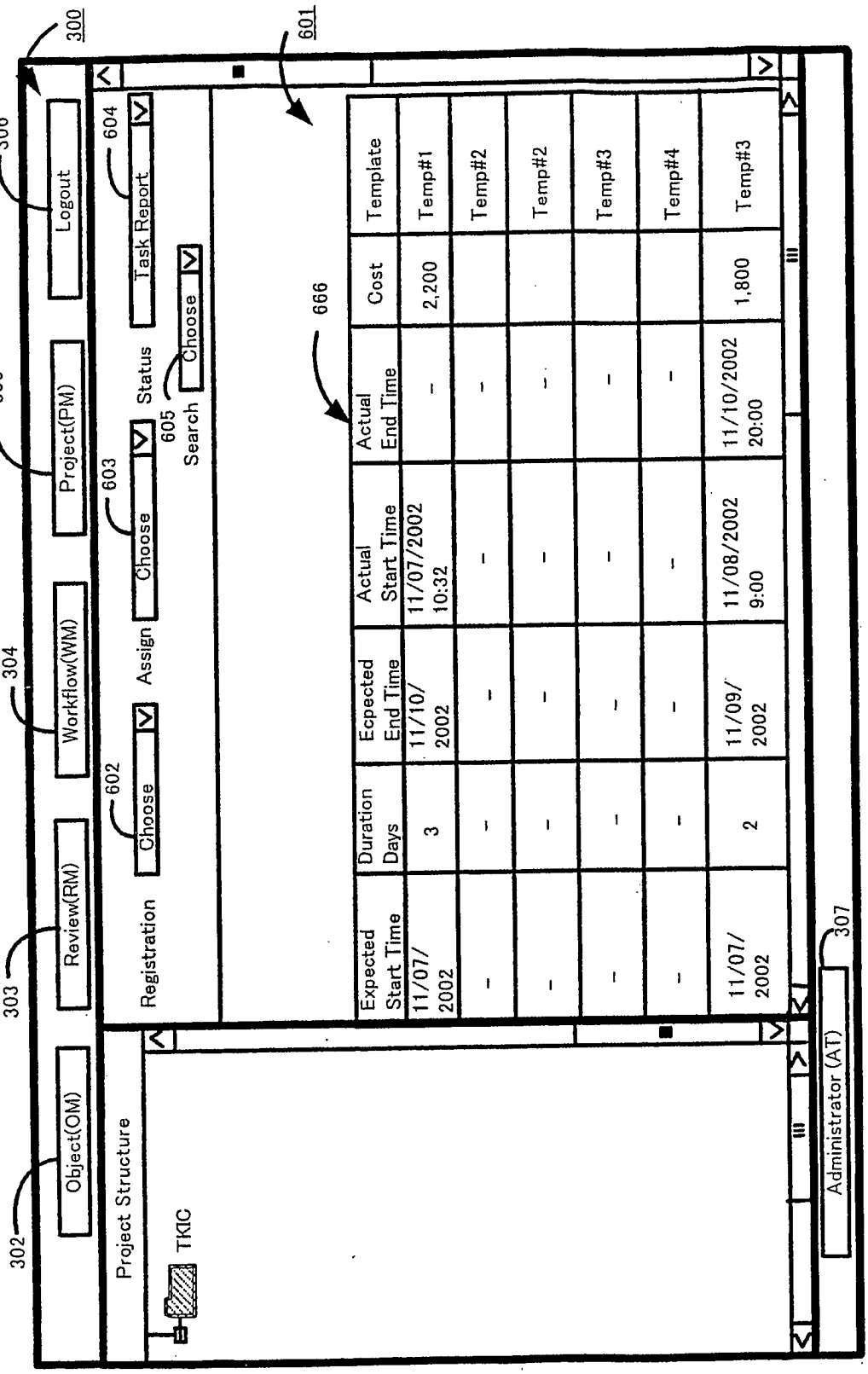

300
306
Logout
305
Project(PM)
304
Workflow(WM)
303
Review(RM)
302
Object(OM)
Project Structure
TKIC
Registration
602
Choose
Assign
603
Choose
Status
605
Search
Choose
604
Task Report
601
666
Expected Start Time
Duration Days
Ecpected End Time
Actual Start Time
Actual End Time
Cost
Template
11/07/2002
3
11/10/2002
11/07/2002 10:32
-
2,200
Temp#1
-
-
-
-
-
Temp#2
-
-
-
-
-
Temp#2
-
-
-
-
-
Temp#3
-
-
-
-
-
Temp#4
11/07/2002
2
11/09/2002
11/08/2002 9:00
11/10/2002 20:00
1,800
Temp#3
Administrator (AT)
307

FIG. 50

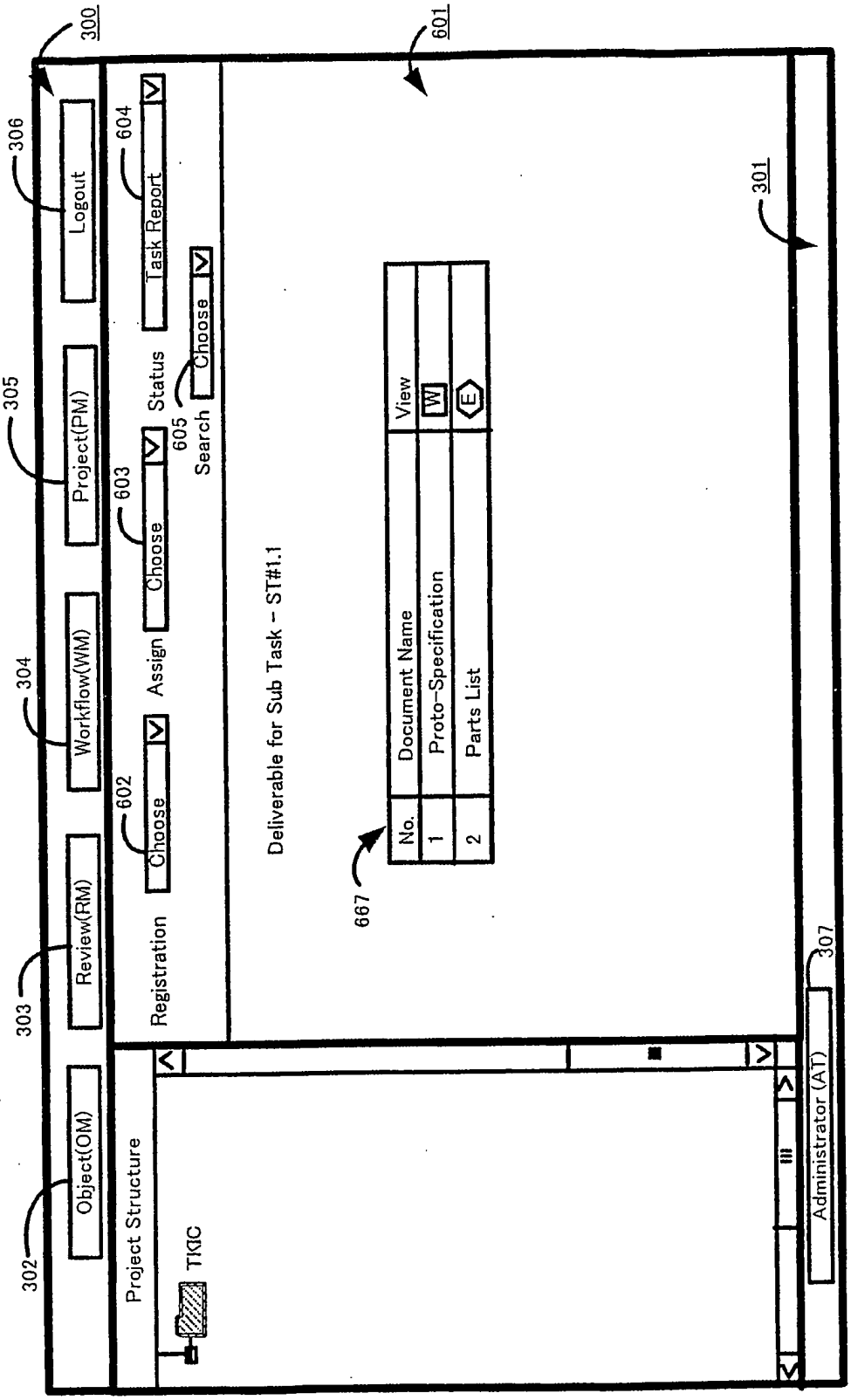

300
301
302
303
304
305
306
307
601
602
603
604
605
667
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Project Structure
TKC
Registration
Choose
Assign
Choose
Search
Status
Choose
Task Report
Deliverable for Sub Task - ST#1.1
No.
Document Name
View
1
Proto-Specification
W
2
Parts List
E
Administrator (AT)

FIG. 51

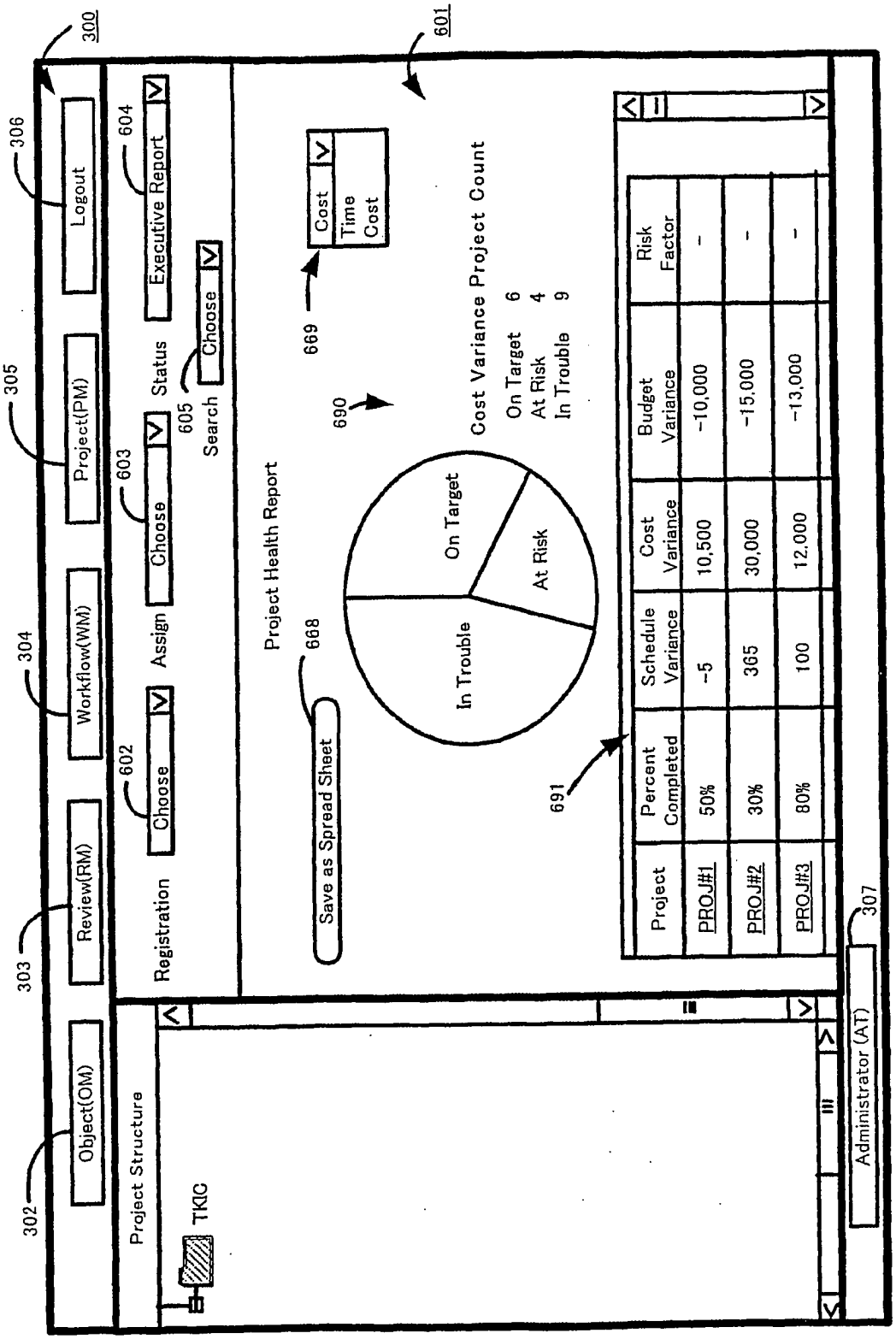

300
306
Logout
Executive Report
604
Project(PM)
305
Status
Choose
605
Search
Choose
603
Assign
Workflow(WM)
304
Choose
602
Registration
Review(RM)
303
Object(OM)
302
Project Structure
TKIC
601
669
Cost
Time Cost
690
Project Health Report
668
Save as Spread Sheet
On Target
At Risk
In Trouble
Cost Variance Project Count
On Target 6
At Risk 4
In Trouble 9
691
Project
Percent Completed
Schedule Variance
Cost Variance
Budget Variance
Risk Factor
PROJ#1
50%
-5
10,500
-10,000
-
PROJ#2
30%
365
30,000
-15,000
-
PROJ#3
80%
100
12,000
-13,000
-
Administrator (AT)
307

FIG.52

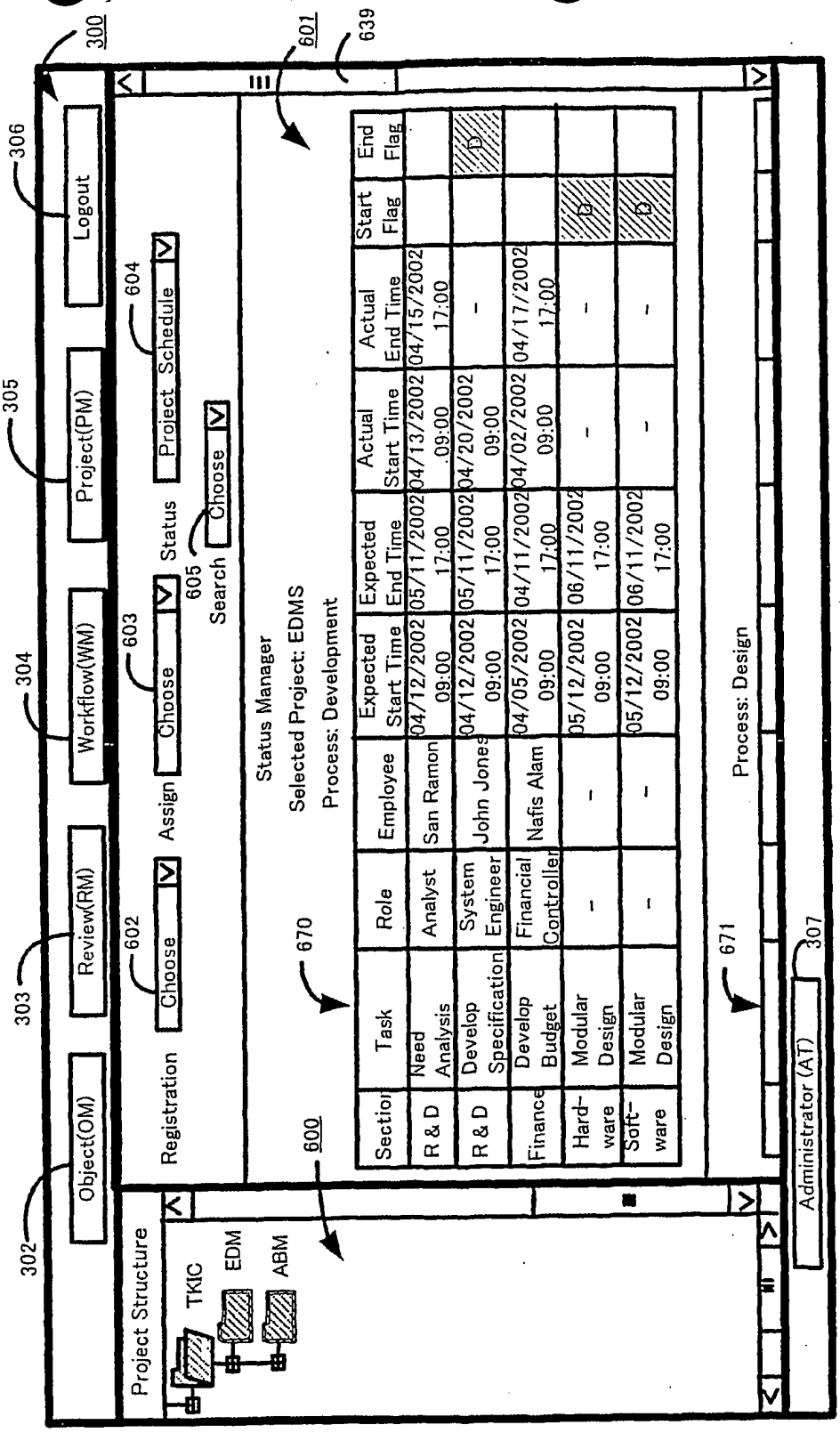
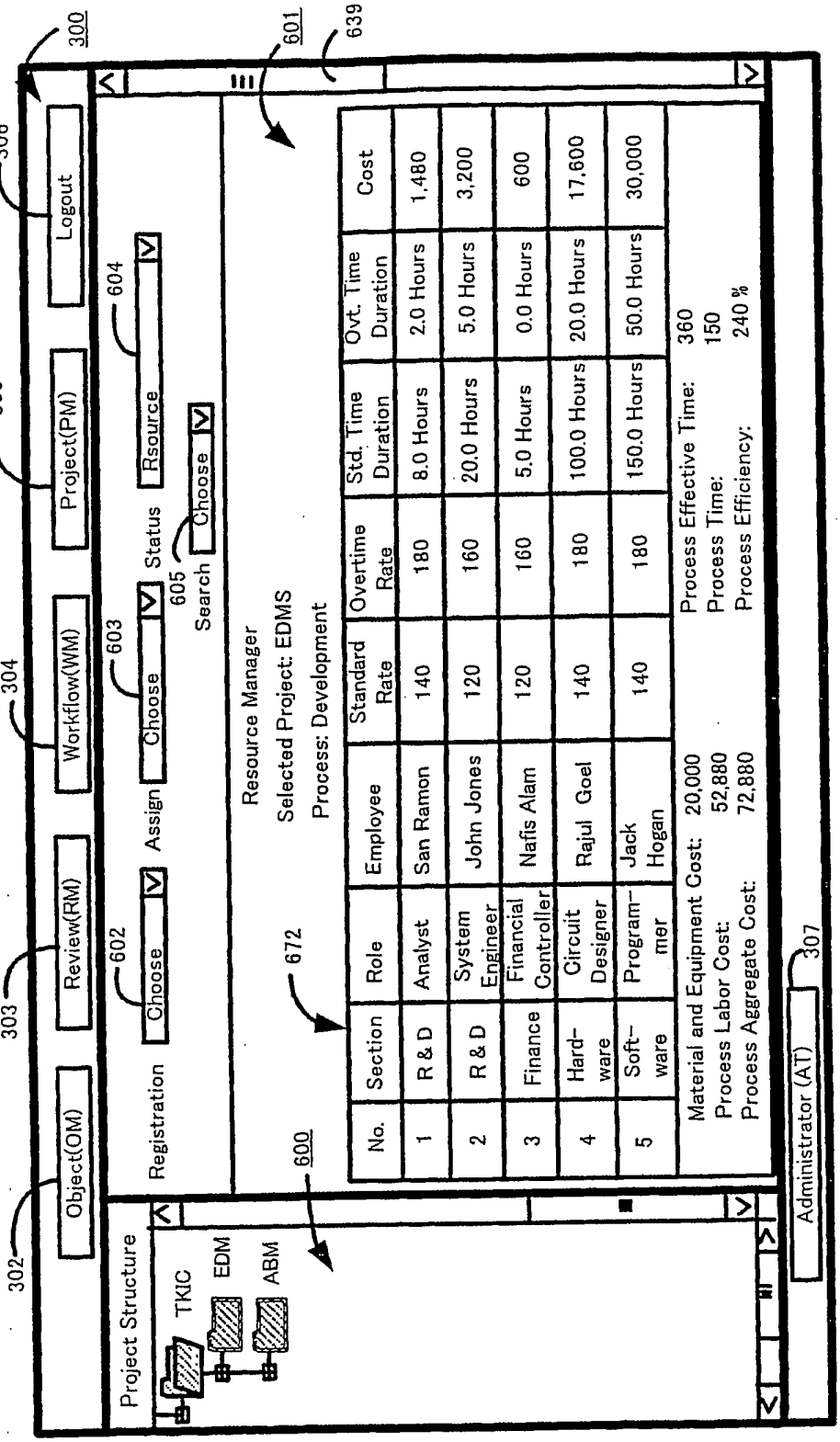

300
301
302
303
304
305
306
Object(OM)
Review(RM)
Workflow(WM)
Project(PM)
Logout
Project Structure
TKIC
EDM
ABM
Registration
Choose
Assign
Choose
Search
Status
Choose
Project Schedule
Status Manager
Selected Project: EDMS
Process: Development
600
601
602
603
604
605
639
670
671
Section
Task
Role
Employee
Expected Start Time
Expected End Time
Actual Start Time
Actual End Time
Start Flag
End Flag
R & D
Need Analysis
Analyst
San Ramon
04/12/2002 09:00
05/11/2002 17:00
04/13/2002 09:00
04/15/2002 17:00
R & D
Develop Specification
System Engineer
John Jones
04/12/2002 09:00
05/11/2002 17:00
04/20/2002 09:00
-
Finance
Develop Budget
Financial Controller
Nafis Alam
04/05/2002 09:00
04/11/2002 17:00
04/02/2002 09:00
04/17/2002 17:00
Hard-ware
Modular Design
-
-
05/12/2002 09:00
06/11/2002 17:00
-
-
Soft-ware
Modular Design
-
-
05/12/2002 09:00
06/11/2002 17:00
-
-
Process: Design
Administrator (AT)
307

FIG. 53



No.	Section	Role	Employee	Standard Rate	Overtime Rate	Std. Time Duration	Ovt. Time Duration	Cost
1	R & D	Analyst	San Ramon	140	180	8.0 Hours	2.0 Hours	1,480
2	R & D	System Engineer	John Jones	120	160	20.0 Hours	5.0 Hours	3,200
3	Finance	Financial Controller	Nafis Alam	120	160	5.0 Hours	0.0 Hours	600
4	Hard-ware	Circuit Designer	Rajul Goel	140	180	100.0 Hours	20.0 Hours	17,600
5	Soft-ware	Program-mer	Jack Hogan	140	180	150.0 Hours	50.0 Hours	30,000

FIG.54

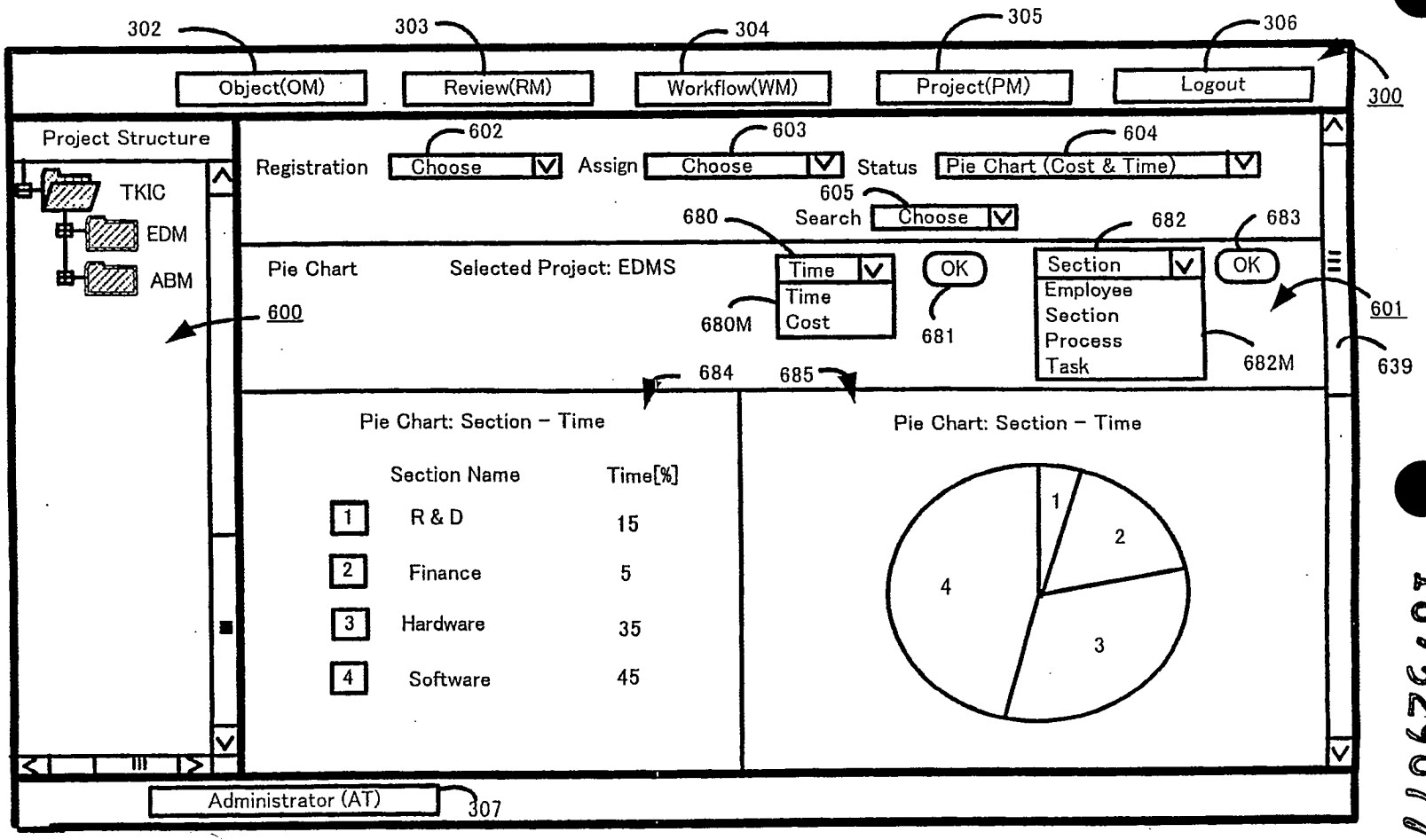


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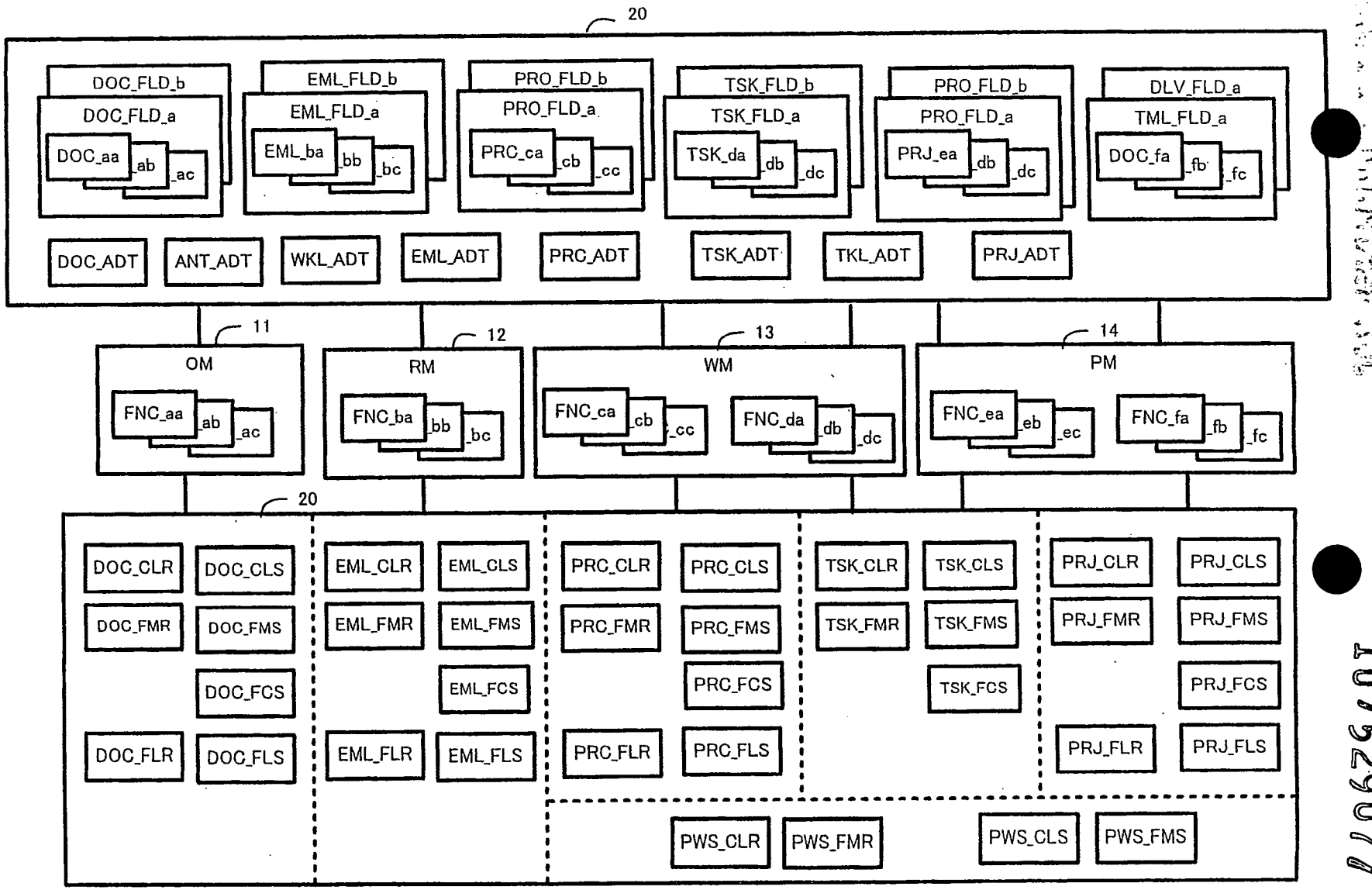
FIG. 55



10/529077

FIG. 56

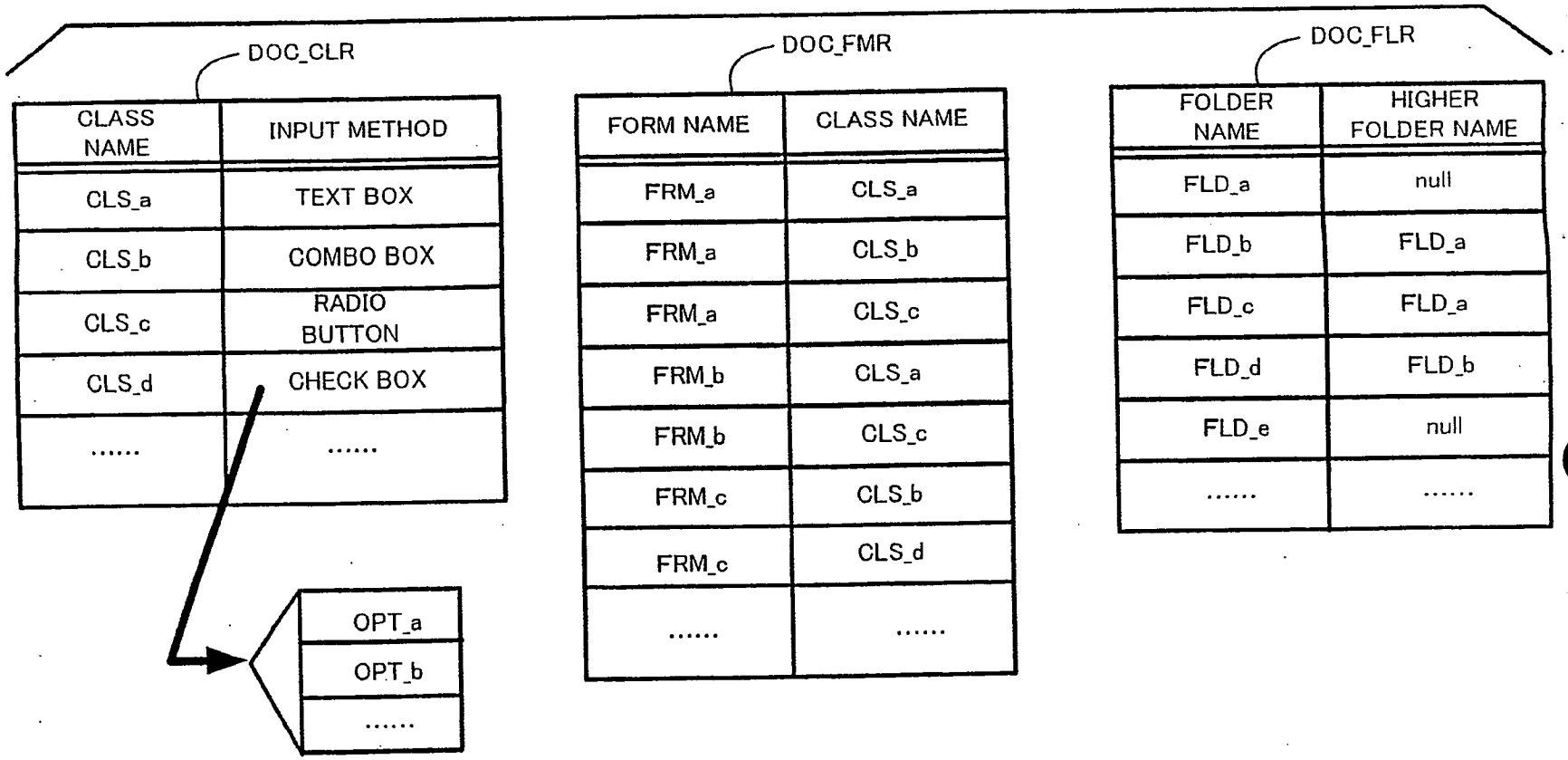


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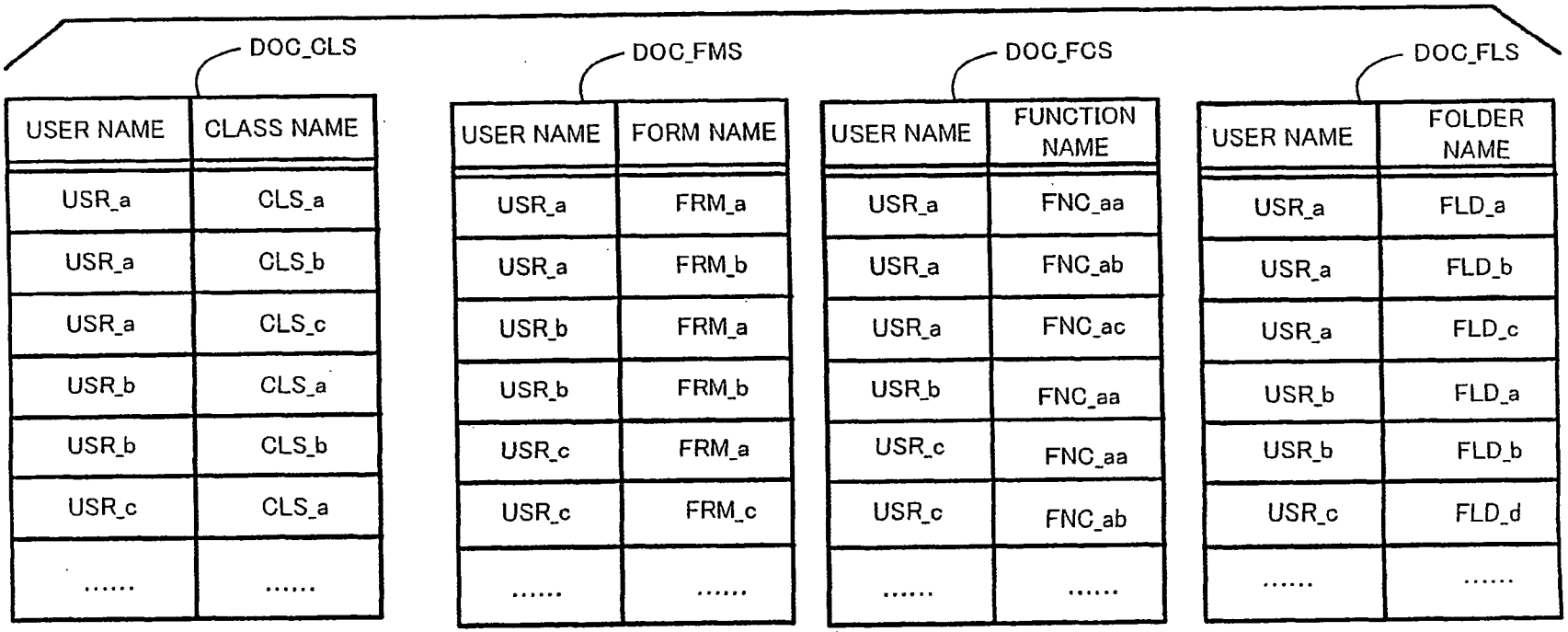
FIG. 57



DOC_CLS

USER NAME	CLASS NAME
USR_a	CLS_a
USR_a	CLS_b
USR_a	CLS_c
USR_b	CLS_a
USR_b	CLS_b
USR_c	CLS_a
.....	.....

DOC_FMS

USER NAME	FORM NAME
USR_a	FRM_a
USR_a	FRM_b
USR_b	FRM_a
USR_b	FRM_b
USR_c	FRM_a
USR_c	FRM_c
.....	.....

DOC_FCS

USER NAME	FUNCTION NAME
USR_a	FNC_aa
USR_a	FNC_ab
USR_a	FNC_ac
USR_b	FNC_aa
USR_c	FNC_aa
USR_c	FNC_ab
.....	.....

DOC_FLS

USER NAME	FOLDER NAME
USR_a	FLD_a
USR_a	FLD_b
USR_a	FLD_c
USR_b	FLD_a
USR_b	FLD_b
USR_c	FLD_d
.....	.....

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FIG.58

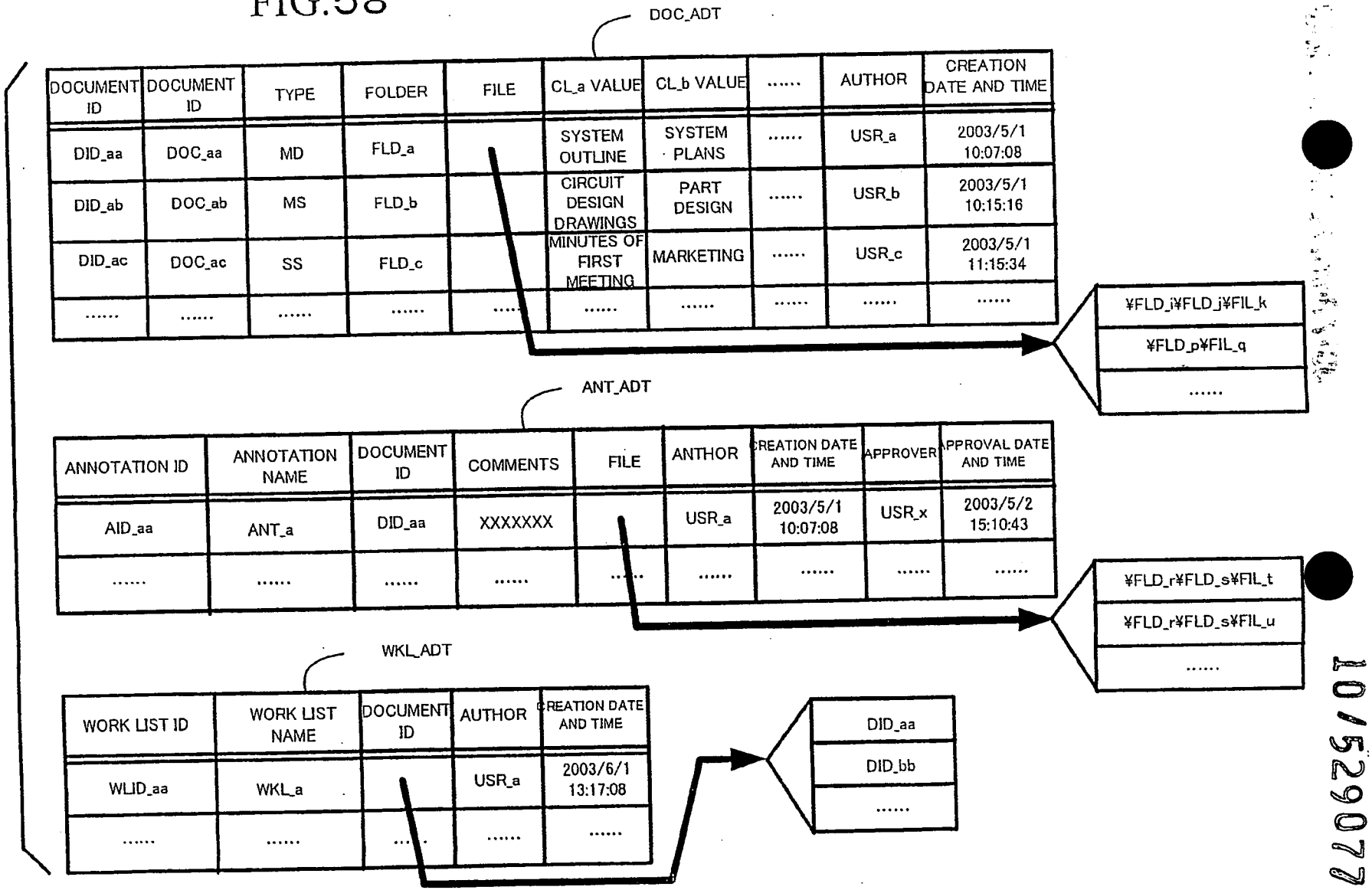

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FIG. 59

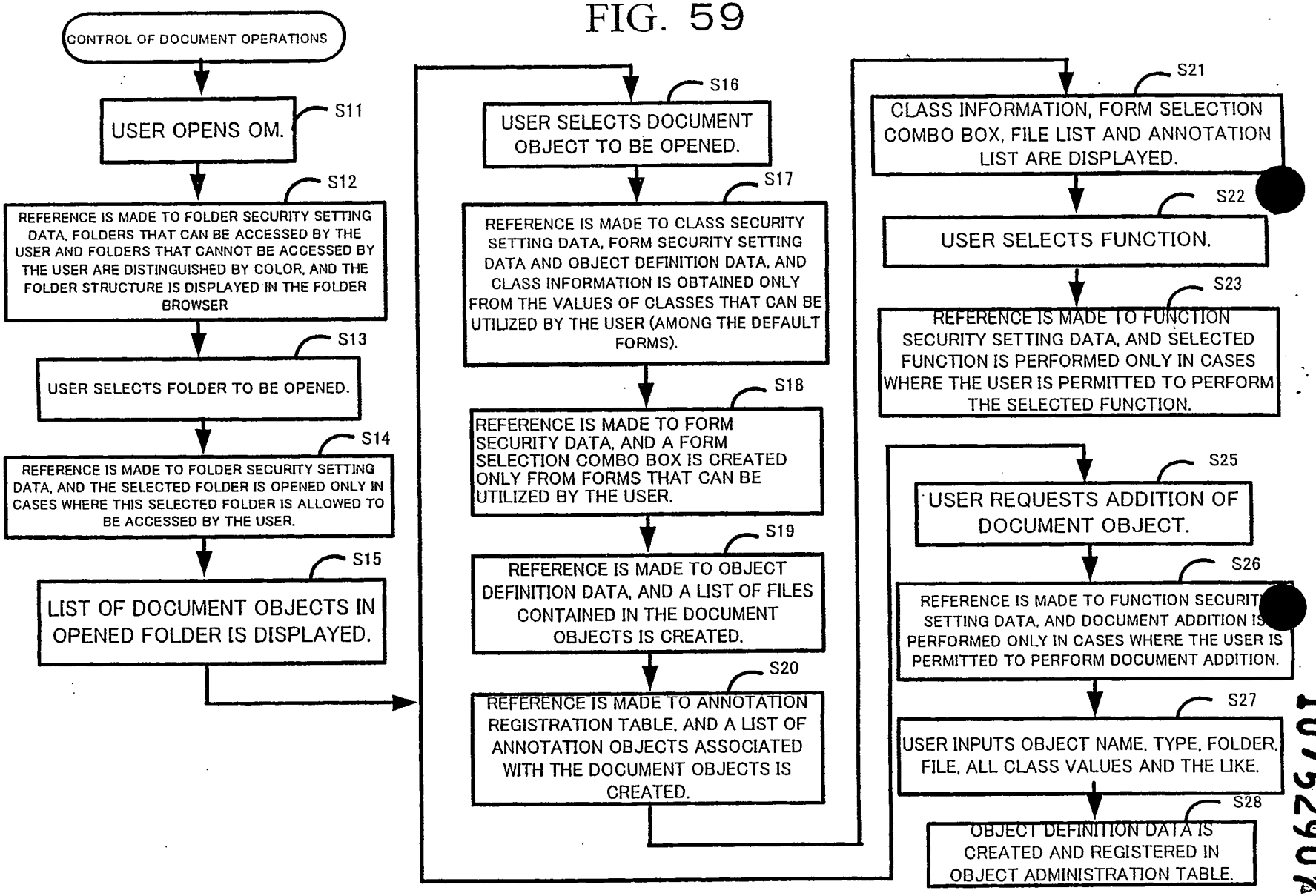

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FIG. 60

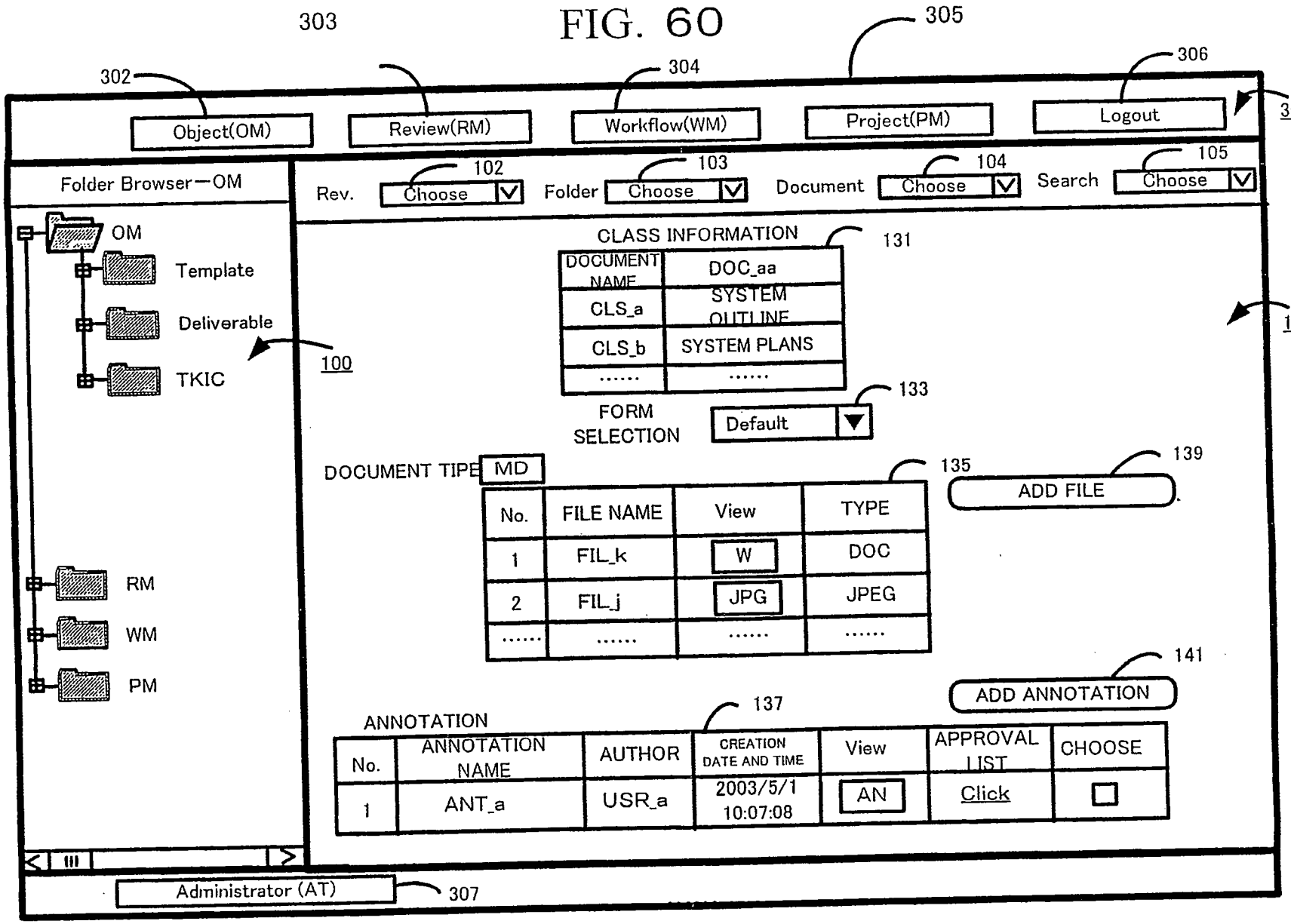

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FIG. 61

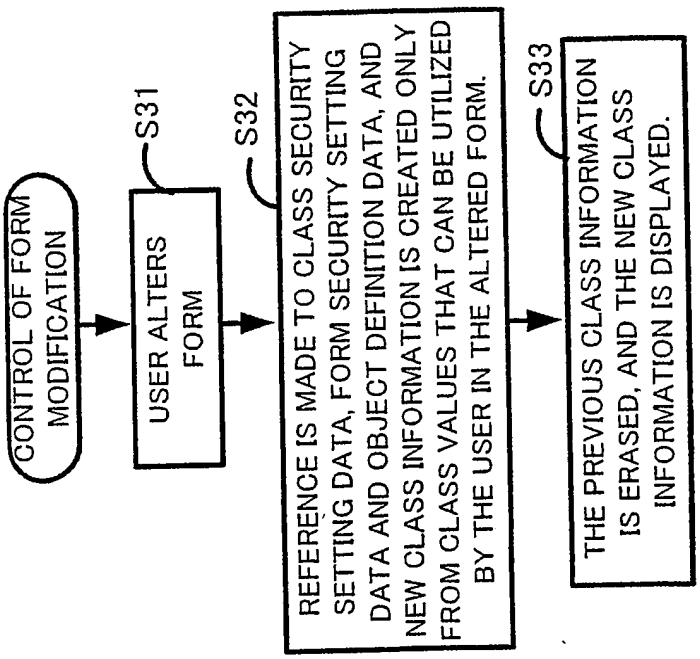
CONTROL OF FORM MODIFICATION
S31
USER ALTERS FORM
S32
REFERENCE IS MADE TO CLASS SECURITY SETTING DATA, FORM SECURITY SETTING DATA AND OBJECT DEFINITION DATA, AND NEW CLASS INFORMATION IS CREATED ONLY FROM CLASS VALUES THAT CAN BE UTILIZED BY THE USER IN THE ALTERED FORM.
S33
THE PREVIOUS CLASS INFORMATION IS ERASED, AND THE NEW CLASS INFORMATION IS DISPLAYED.

FIG. 62

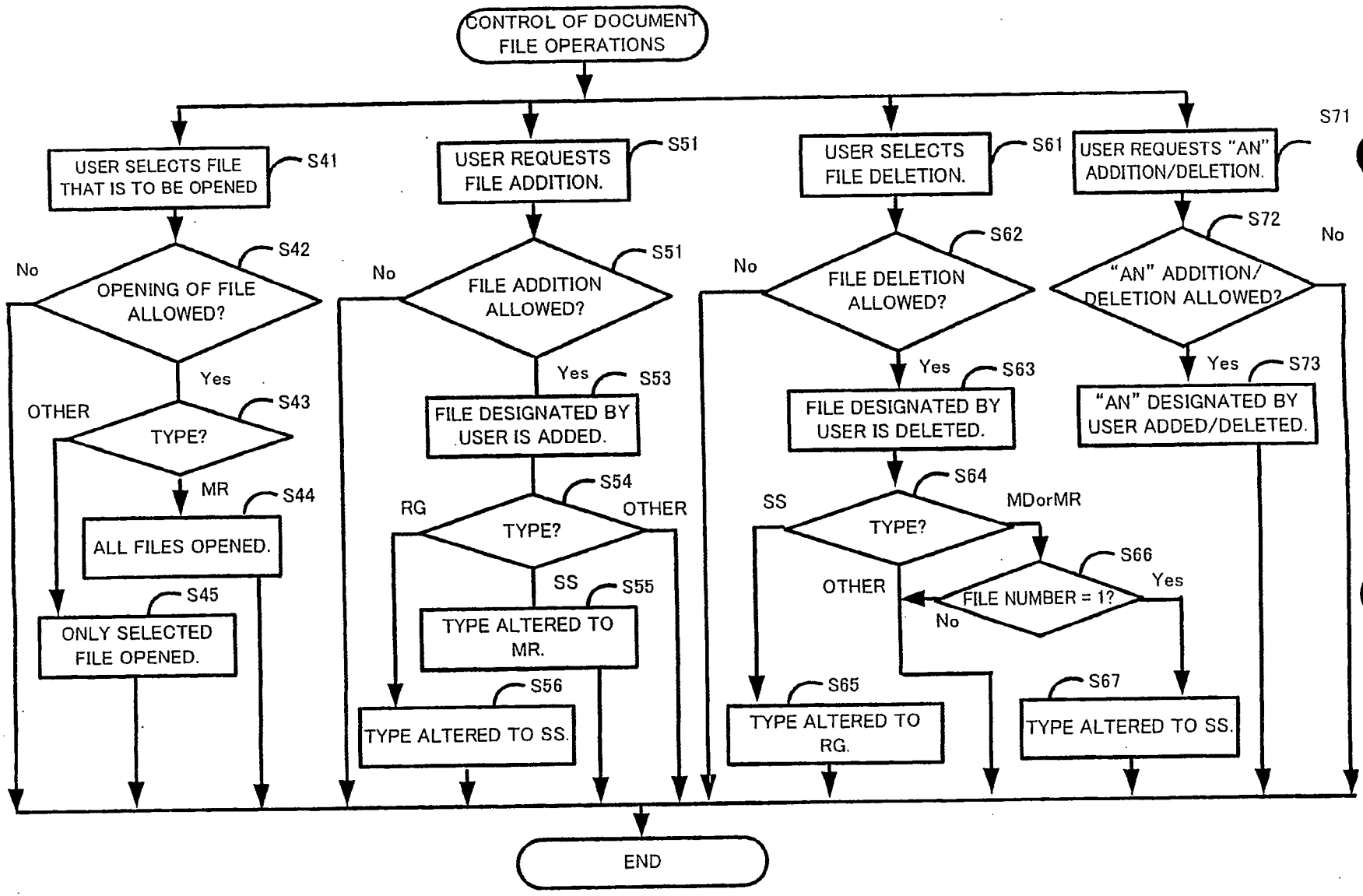

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FIG. 63

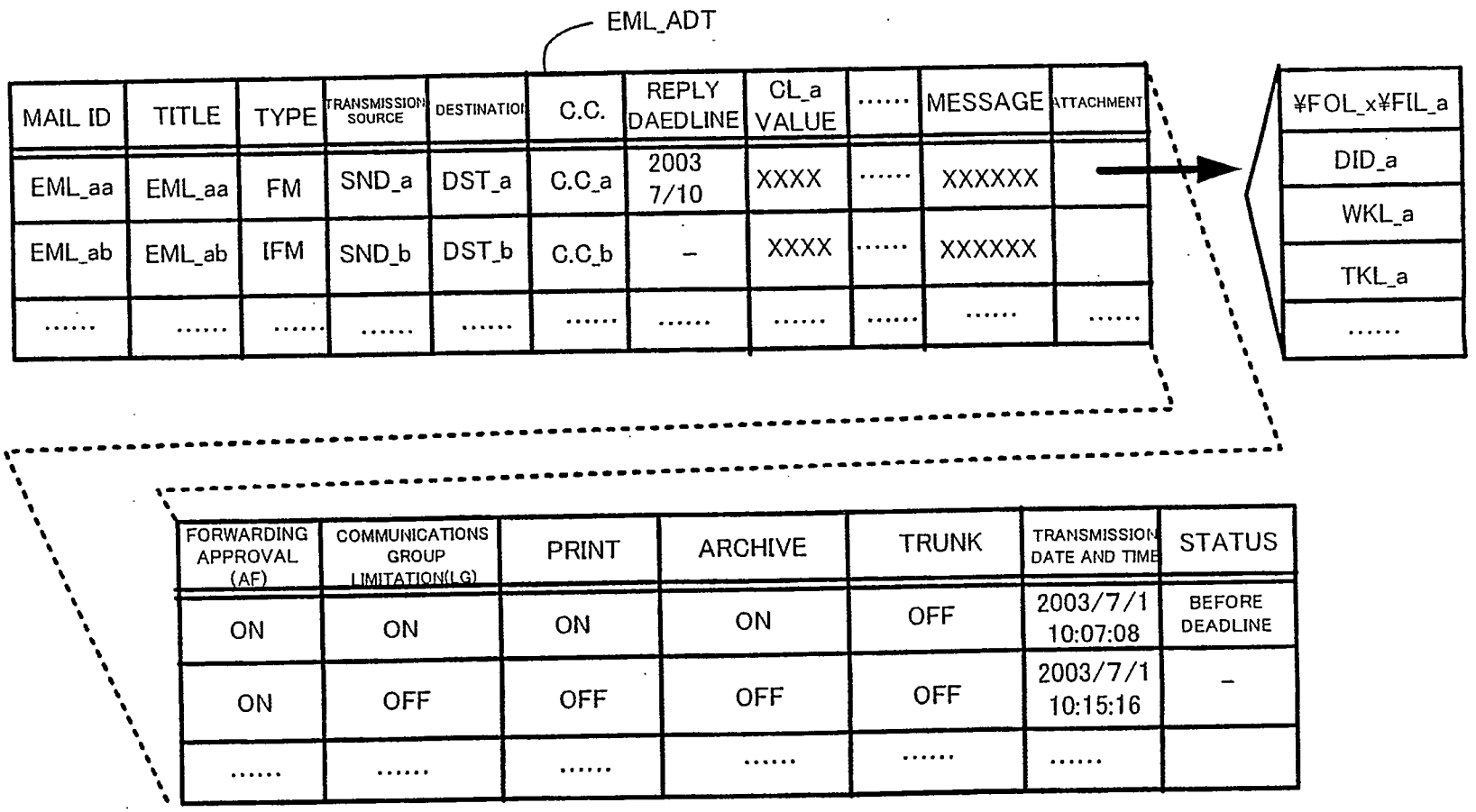

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FIG. 64

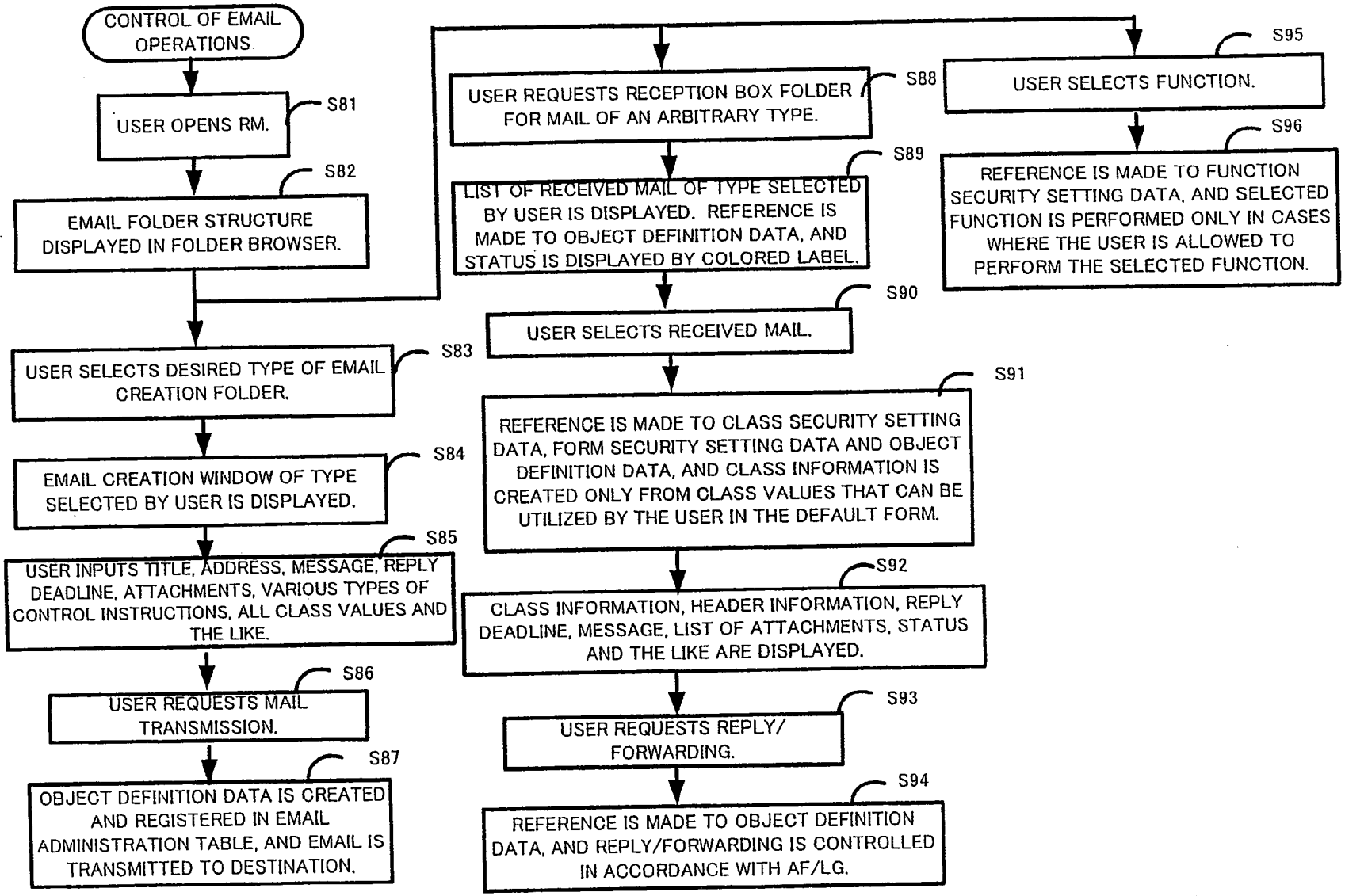

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FIG. 65

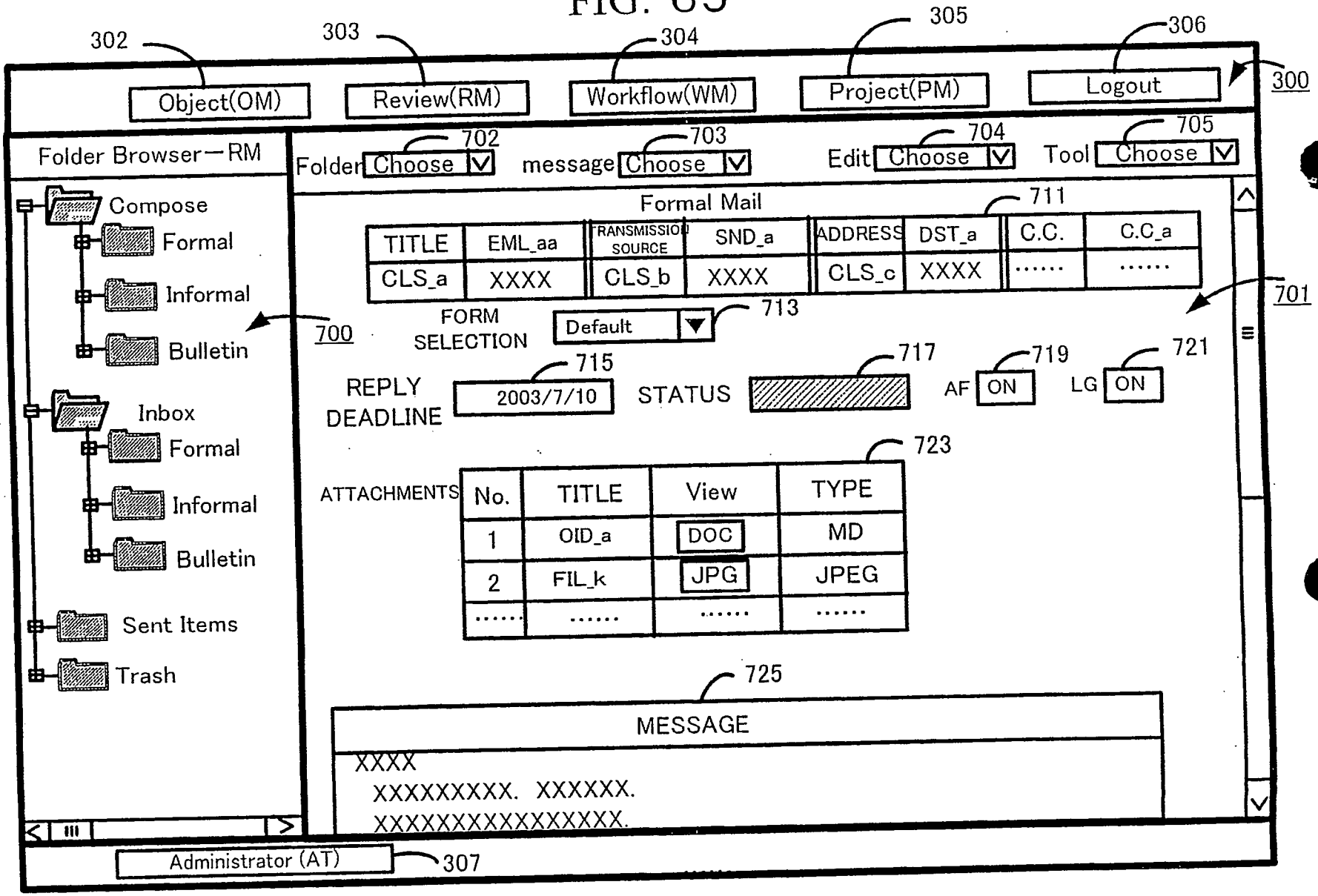

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FIG. 66

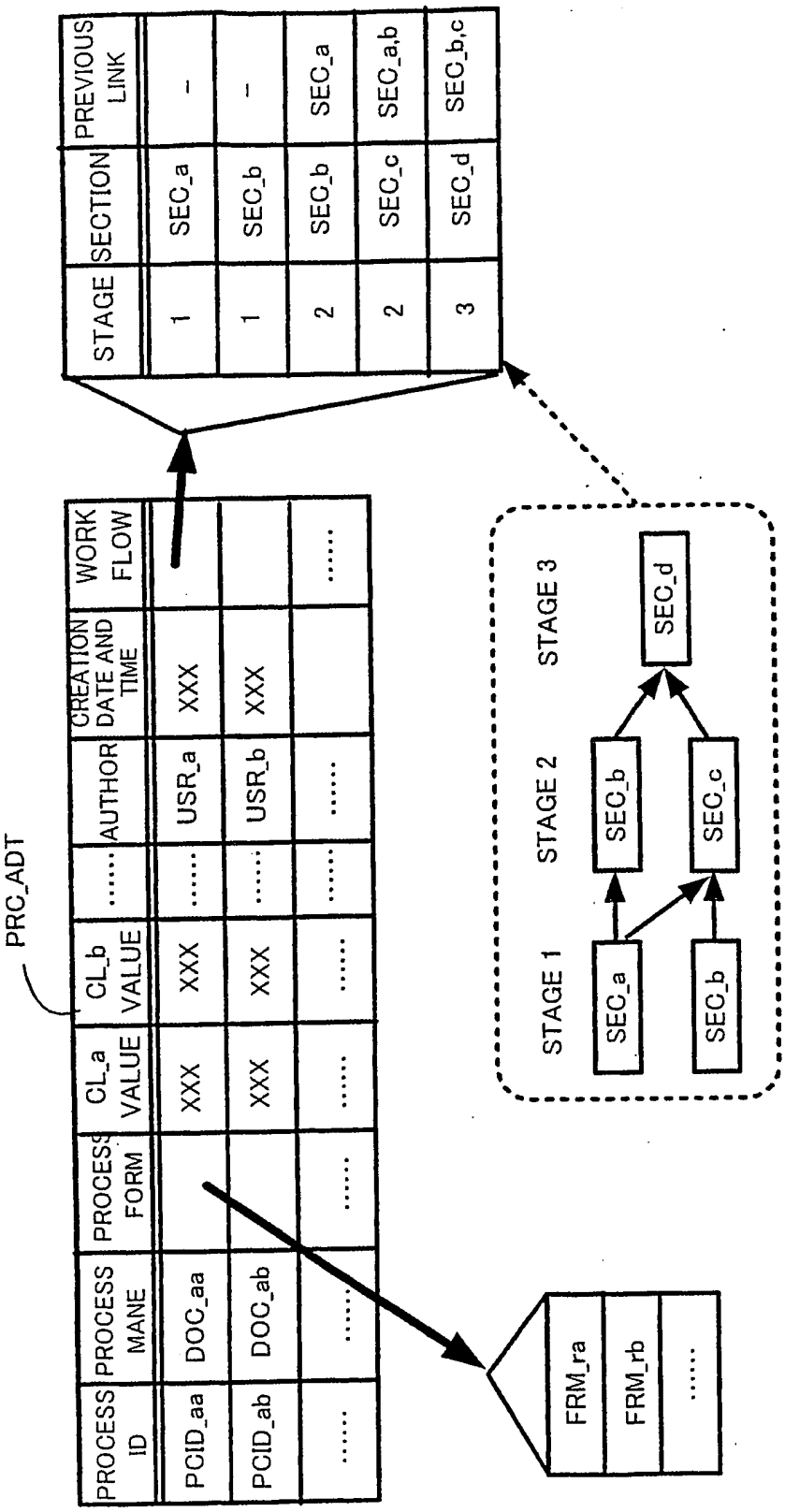
PRC_ADT
PROCESS ID
PROCESS MANE
PROCESS FORM
CL_a VALUE
CL_b VALUE
.....
AUTHOR
CREATION DATE AND TIME
WORK FLOW
PCID_aa
DOC_aa
XXX
XXX
USR_a
XXX
PCID_ab
DOC_ab
XXX
XXX
USR_b
XXX
.....
.....
.....
.....
.....
.....
FRM_ra
FRM_rb
.....
STAGE
SECTION
PREVIOUS LINK
1
SEC_a
–
1
SEC_b
–
2
SEC_b
SEC_a
2
SEC_c
SEC_a,b
3
SEC_d
SEC_b,c
STAGE 1
STAGE 2
STAGE 3
SEC_a
SEC_b
SEC_b
SEC_c
SEC_d

FIG. 67

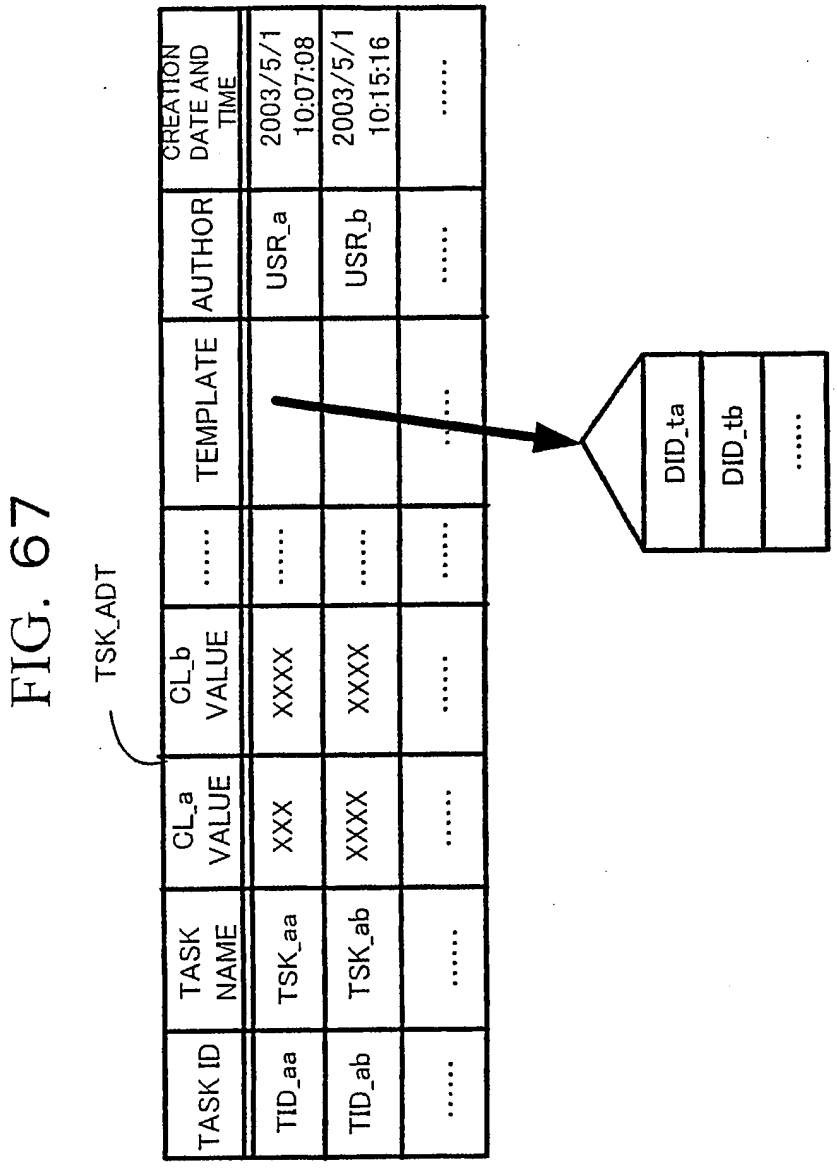
TSK_ADT
TASK ID
TASK NAME
CL_a VALUE
CL_b VALUE
.....
TEMPLATE
AUTHOR
CREATION DATE AND TIME
TID_aa
TSK_aa
XXX
XXXX
.....
USR_a
2003/5/1 10:07:08
TID_ab
TSK_ab
XXXX
XXXX
.....
USR_b
2003/5/1 10:15:16
DID_ta
DID_tb
.....

FIG. 68

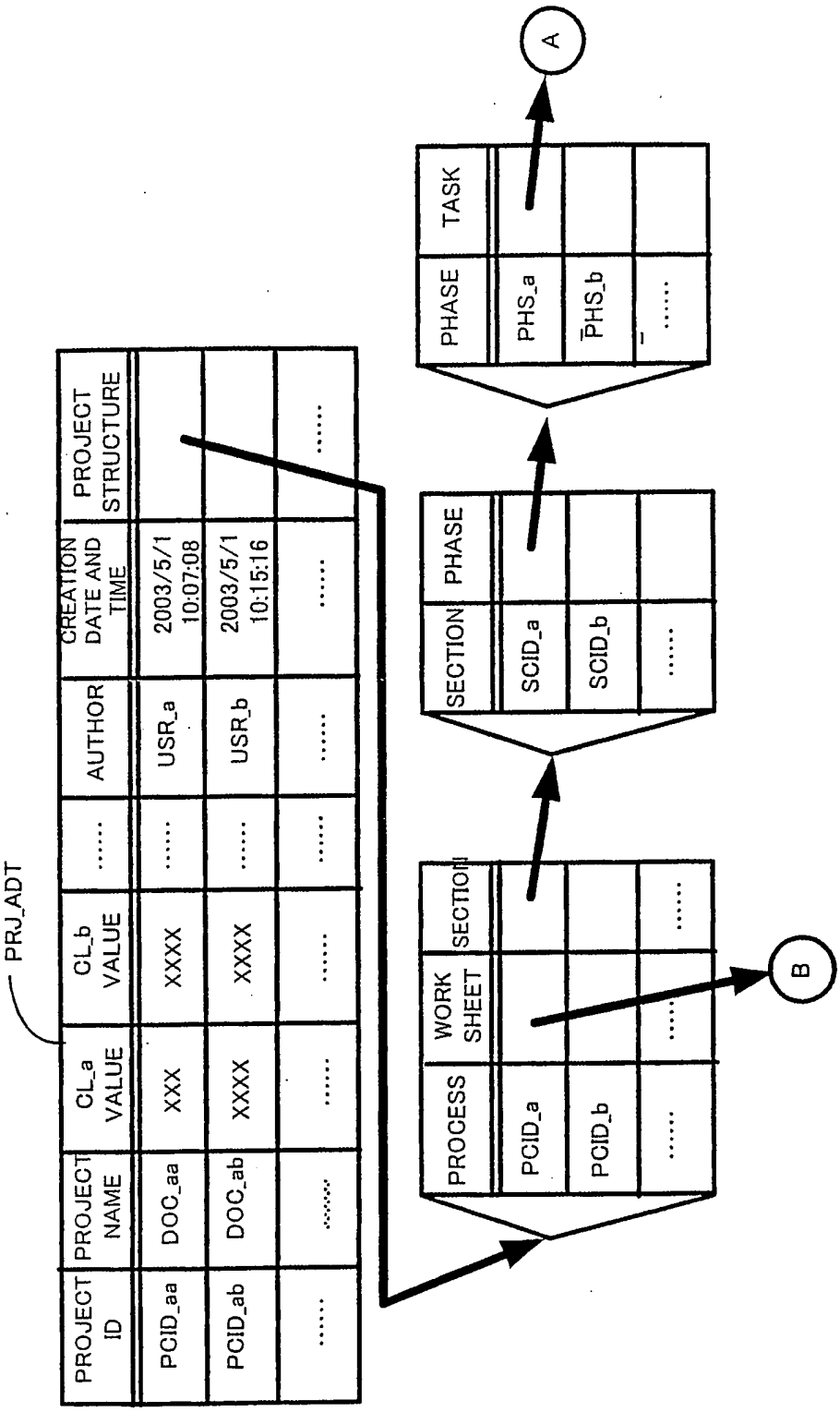
PRJ_ADT
PROJECT ID
PROJECT NAME
CL_a VALUE
CL_b VALUE
.....
AUTHOR
CREATION DATE AND TIME
PROJECT STRUCTURE
PCID_aa
DOC_aa
XXX
XXXX
.....
USR_a
2003/5/1 10:07:08
PCID_ab
DOC_ab
XXXX
XXXX
.....
USR_b
2003/5/1 10:15:16
PROCESS
WORK SHEET
SECTION
PCID_a
PCID_b
SECTION
PHASE
SCID_a
SCID_b
PHASE
TASK
PHS_a
PHS_b
A
B

FIG. 69

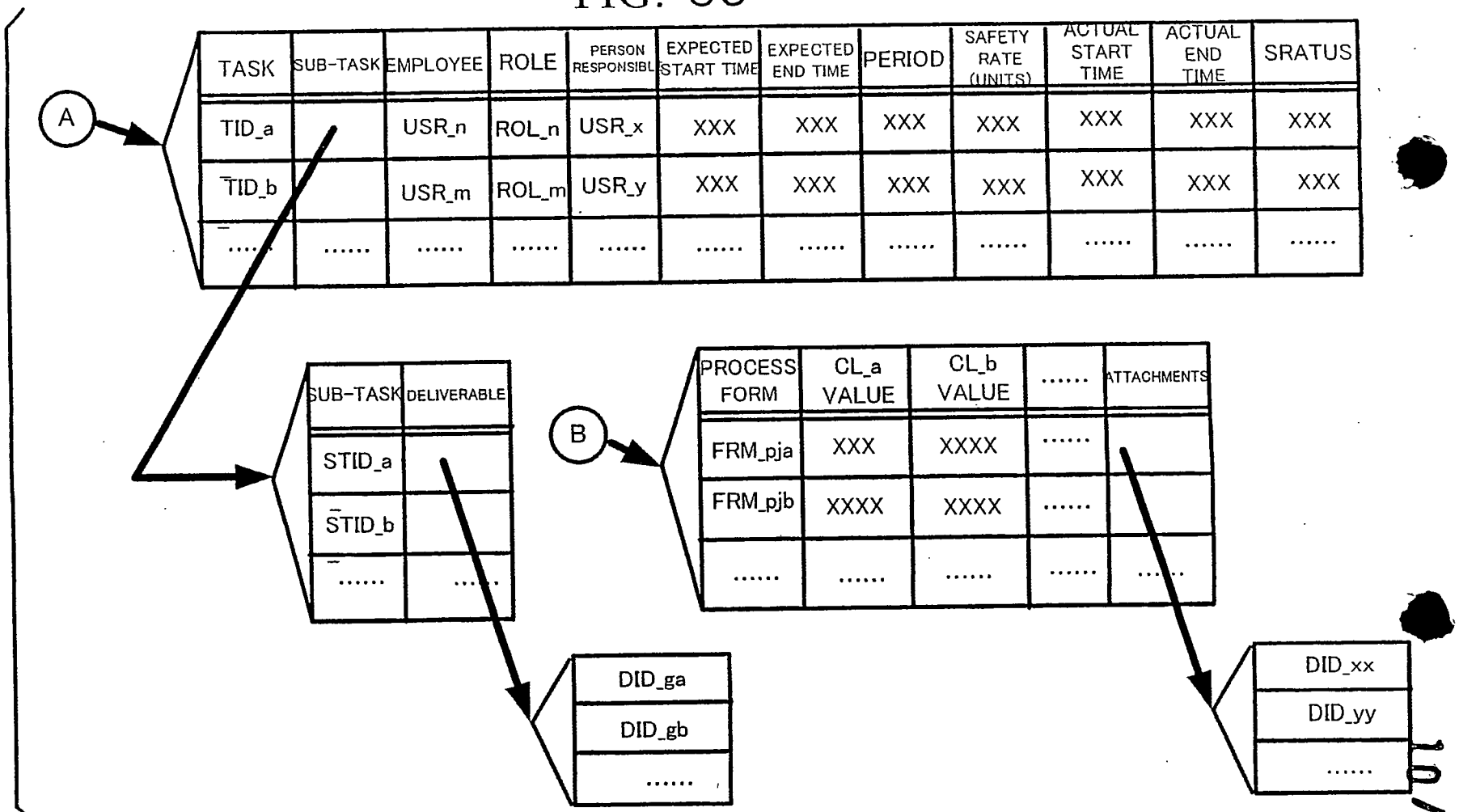

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FIG. 70

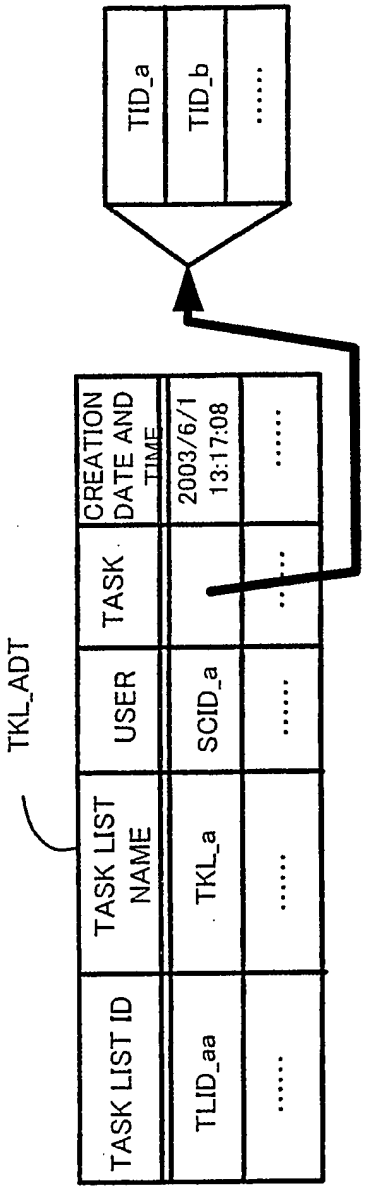
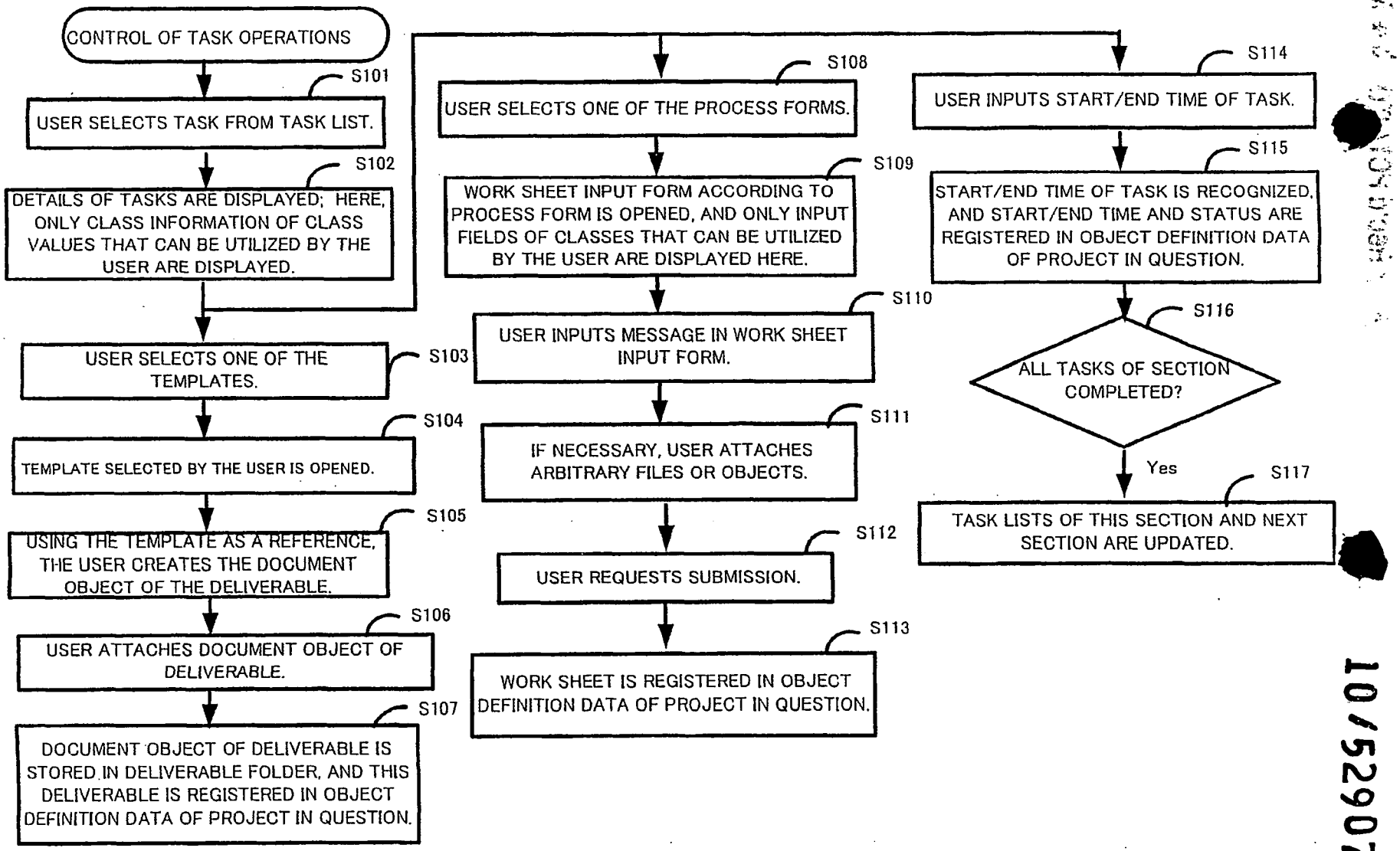

TKL_ADT
TASK LIST ID
TASK LIST NAME
USER
TASK
CREATION DATE AND TIME
TLID_aa
TKL_a
SCID_a
2003/6/1 13:17:08
TID_a
TID_b

FIG. 71



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